Journal of the

AMERICAN PHARMACEUTICAL ASSOCIATION

VOL. XIV, No. 11
CONSECUTIVE No. 21

Practical Pharmacy Edition

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WALTER M. CHASE
ROBERT P. FISCHELIS
F. ROYCE FRANZONI
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Address All Communications Regarding Advertising to the Managing Editor, 2215 Constitution Ave., Washington 7, D. C.

NOVEMBER, 1953

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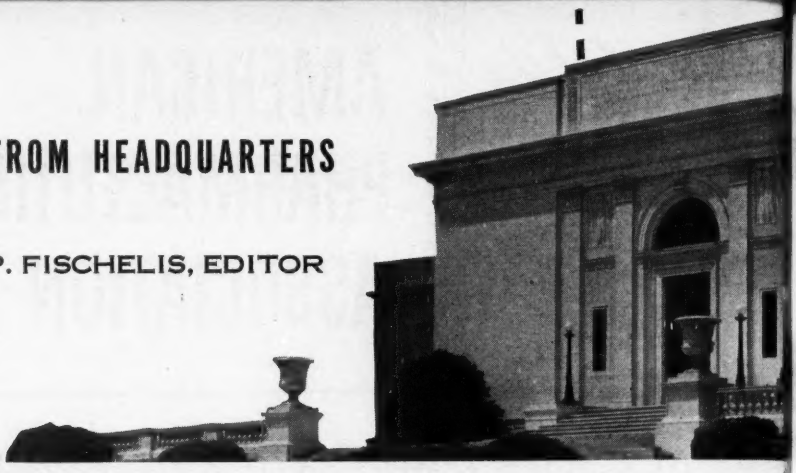
STRAIGHT FROM HEADQUARTERS

ROBERT P. FISCHELIS, EDITOR



Eisenhower Has the Answer

THE length of time spent in acquiring a college education in pharmacy, or in any other subject for that matter, will not be determined by pharmacists. The time has long since passed when argument is needed to convince the people of America that more of the time of our youth will have to be spent in formal preparation for the responsibility of American citizenship of tomorrow.

A number of years ago a commission was appointed by the President of the United States to look into the trends of education and the requirements for building a better citizenship through education. This commission, after exhaustive surveys, conferences, and studies, pointed out that in the near future, the compulsory terminal of formal education for every boy and girl in America will be graduation from a junior college. This would require two years of education beyond the present high school course.

Last month, President Eisenhower, in a speech at Defiance College in Ohio, gave wholehearted endorsement to the program of better preparation of our youth for the problems which they will face in the Atomic Age.

Said the President, "Indeed, I firmly believe more extensive education than that obtainable in high schools must be brought to every community and every locality in such a way that every young person, regardless of his means or his lack of means, can go to school for a minimum of two additional years."

The President was not indulging in wishful thinking in making this statement; he was merely pointing to a necessary "next step" which has been accepted by the rank and file of the American people and has been put into actual practice by all of the major professional groups in the healing arts except pharmacy.

Pharmaceutical organizations which spend time and effort in an attempt to buck the tides in education would be better advised to give thought to the endowment and promotion of the best interests of schools and colleges of pharmacy, so that these institutions will not be left hopelessly behind the times in providing facilities for adequate professional training.

One of the reprehensible activities of those who, for one reason or another, have opposed more than four years of college education as a preparation for the practice of pharmacy is the manner in which they have attempted to distort the findings of the Pharmaceutical Survey.

In the "Findings and Recommendations" of the Survey, the problem of pharmaceutical education was summarized in the following words: "The practical problem, in brief, is how best shall pharmacy promote its educational development. There is little question but that it must strive toward higher professional goals. In doing this, the present four-year collegiate programs must be improved and strengthened. To achieve a professional standing commensurate with that of other health professions, steps must be taken to develop and establish a program of education and training on a level comparable to preparation for those professions."

On the basis of this statement of the problem, the Survey then made the following recommendations:

"IT IS RECOMMENDED that the American Association of Colleges of Pharmacy and the American Council on Pharmaceutical Education continue their efforts for the constructive betterment of the existing four-year program of education and training providing the essential knowledge and skills for the practice of pharmacy and leading to the degree of Bachelor of Science in Pharmacy.

"IT IS RECOMMENDED that the American Association of Colleges of Pharmacy and the American Council on Pharmaceutical Education take the necessary initial steps for the development and establishment of a six-year program of education and training leading to the professional degree of Doctor of Pharmacy (Phar.D.), this program to include two or more years of general education and basic science training."

No responsible educator or member of our profession has advocated an increase in the length of the professional course in pharmacy. It is recognized that with collegiate preparation in the basic sciences such as is now required of students of medicine, dentistry, chiropody, optometry, and others, it is possible not only to turn out a good basically trained pharmacist in four years, but it is possible to include in such a professional course the necessary electives to enable the student to qualify for general pharmaceutical practice, hospital pharmacy, manufacturing pharmacy, pharmacy administration, and other specialties.

It is universally recognized, even by those who have expressed themselves in opposition to lengthened combined pre-professional and professional education, that only the better qualified students are finishing the present four-year program in four years. In colleges of pharmacy where the standards are high, and where they are adhered to rigidly, it is more and more the rule rather than the exception that students are taking five years or more to finish the educational program which has been prescribed on a four-year basis.

Let us recognize that adequate preparation for the study of pharmacy requires more than a four-year high school course, as twenty per cent of our accredited colleges of pharmacy have already done. Let us now recruit pharmacy students from the junior colleges of the nation rather than from the high schools, since that is what we shall have to do in the near future anyway, as President Eisenhower has so aptly predicted.

Last Call for National Pharmacy Week Photographs

PARTICIPATION in the National Pharmacy Week Display Contest has been more complete this year than ever before. The members of the AMERICAN PHARMACEUTICAL ASSOCIATION who arranged window displays for entry in the Retail Pharmacy Contest must have photographs of their displays in the hands of the secretary of their state pharmaceutical association not later than November 15.

It should be borne in mind that photographs submitted must be 8 x 10-inch glossy prints. The photograph adjudged best by each State Pharmacy Week Committee must be transmitted to the AMERICAN PHARMACEUTICAL ASSOCIATION, 2215 Constitution Avenue, N.W., Washington 7, D.C., by December 15, 1953. The National Committee will meet shortly after December 15 to judge the photographs and award the cash prizes and certificates of merit.

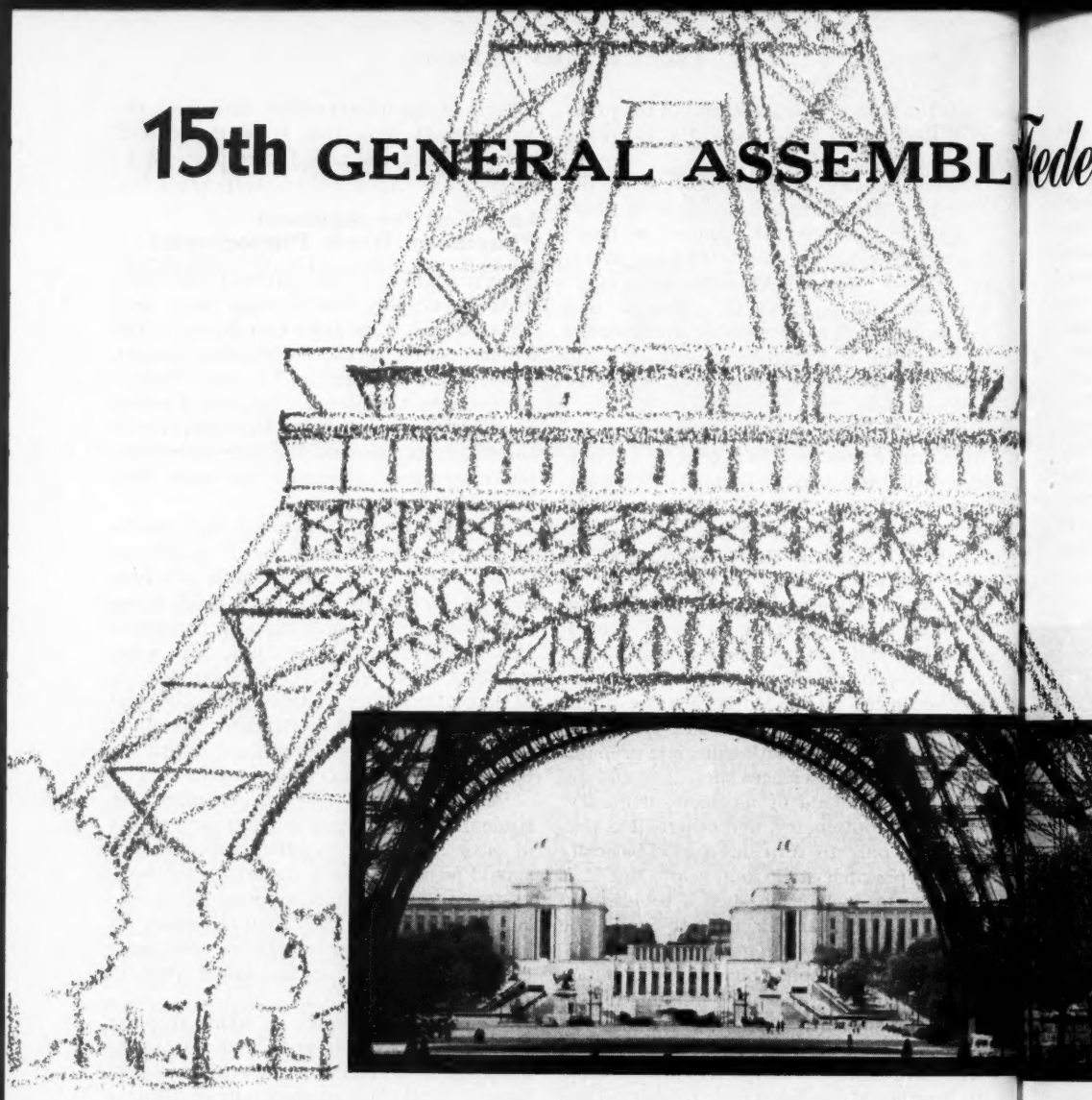
Photographs of displays arranged by students from colleges of pharmacy, either at their schools or in other public places, should be mailed to the AMERICAN PHARMACEUTICAL ASSOCIATION as promtly as possible, but in no case later than December 15, 1953. The national committee will judge these photographs in the latter part of December.

Hospitals and clinics in which displays were made and which are to be entered in the hospitals and clinics competition should likewise send their photographs of displays directly to the AMERICAN PHARMACEUTICAL ASSOCIATION, not later than December 15, 1953.

Charles E. Wilson

It is with great regret that we record the death of Charles E. Wilson of Corinth, Miss., which occurred on October 28. Mr. Wilson was a life member of the A.PH.A. and served the ASSOCIATION in numerous capacities and was its First Vice-President from 1944 to 1946. He was currently a candidate for membership on the Council and he had been very active in the American College of Apothecaries, serving as President of that organization in 1948.

15th GENERAL ASSEMBL*Fede*



ACTING under authorization by the Council of the AMERICAN PHARMACEUTICAL ASSOCIATION, I attended the General Assembly of the International Pharmaceutical Federation, held in Paris, France, September 14–18, 1953. My attendance was that of an alternate for Mr. F. Royce Franzoni, president of the AMERICAN PHARMACEUTICAL ASSOCIATION, and Dr. R. P. Fischelis, secretary of the AMERICAN PHARMACEUTICAL ASSOCIATION, neither of whom, because of other duties, was able to attend this meeting.

In addition to myself, the following individuals were designated by the A.PH.A. as official delegates to the convention and were in attendance: Don E. Francke, Ann Arbor, Mich.; Colonel Howard B. Nelson, Arlington, Va.; W. Arthur Purdum, Baltimore, Md.; Lt. Colonel H. Dale Roth, Falls Church, Va.; and Glenn Sonnedecker, Madison, Wis.

The meetings of the General Assembly of the Federation were held in the Palais de Chaillot, Place du Trocadero, and the meetings of the Council of the Federation were held in the headquarters of the National Pharmaceutical Federation, 13, rue Ballu. A few of the special sessions, such as those of the Scientific Section and the Hospital Pharmacists, were held in the buildings of the National Order of Pharmacists, 4, avenue Ruysdael, and of the Faculty of Pharmacy, 4, avenue de l'Observatoire.

Federation Internationale Pharmaceutique

By JOHN A. MacCARTNEY

chairman, United States Delegation
1st vice-president, American
Pharmaceutical Association

American pharmacists will gain a broader understanding of some of the professional problems facing pharmacy the world over from Mr. MacCartney's report.

The first official meeting of the Assembly was that of the Council which began on the morning of September 14, Monday, and which continued for two days. The Council of the International Pharmaceutical Federation is composed of official delegates from the pharmaceutical associations of all member countries, and in this instance consisted of representation from practically all of the nations of Europe, the Middle East, South America and North America.

The first Council session was opened by the President of the International Pharmaceutical Federation, Dr. Höst Madsen, Denmark, with the presentation of credentials of the various delegates, followed by a continuous business session which lasted well into the evening of the first day. I might mention, at this point, that the Council of the International Pharmaceutical

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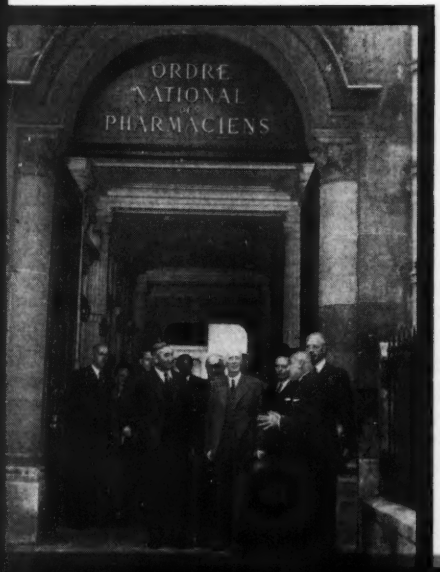

Sir Hugh Linstead, center, with black hat, joined other members of the Federation's Bureau in a visit to the Ordre Nationale de Pharmaciens.

Federation Assembly

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Federation would correspond most closely in the AMERICAN PHARMACEUTICAL ASSOCIATION to our House of Delegates, and the Council meetings are presided over by the Bureau of the F.I.P., which would correspond somewhat to our permanent executive staff of the A.PH.A., and which, for all practical purposes, would be similar to our A.PH.A. Council.

Problems of Financing

The financial reports for the preceding two years were presented by the Treasurer, Dr. T. Potjewijd of Holland, and a proposal was made to increase the dues of members and associate members. The reason for the proposed increase in dues of members and associate members was that the F.I.P. had great difficulty in collection of dues, with a large number of members failing to maintain their membership status by prompt payment of dues billings. A number of delegates to the Council session protested this proposal on the basis that the members in their countries did not have sufficient funds to permit an increase in the dues of the Association. This discussion became quite lively, and an interesting and perhaps humorous comment was made by one of the British delegation, who commented that if the discussion were conducted in English, the American delegation would probably be so sympathetic to the problem that they would contribute a million dollars, and thus solve all of the Association's financial problems. Needless to say, the American delegation did not support this suggestion. In conclusion of the question of delinquent members, it was voted and approved that the names of delinquent members be published in the annual report of the Treasurer.

The Treasurer further reported that no formal budget had been prepared for the coming year because of the impossibility of determining the Federation's probable income, but he promised that the affairs of the Federation would be conducted as inexpensively as possible.

Bureau Membership

Proposals for nominations to the Bureau were then made, and a considerable discussion of a suggestion to enlarge the Bureau continued for some time. Several members of the Council felt that the Bureau, which corresponds, as noted before, to our Council, should be enlarged so that all nationality groups would have representation on the Bureau. At present the Bureau consists of ten members, including the President, six Vice-Presidents, the Secretary-General, the Secretary, and the Treasurer. The consensus of opinion was that it was inadvisable to enlarge the Bureau, since it was essentially an administrative group, and any enlargement to accommodate all nationalities would render its administrative job almost impossible. It was felt that it would be better to so rotate the membership of the Bureau that all nationalities would eventually be represented, and in this way avoid the formation of an administrative group which was unwieldy because of size and the difficulties of conducting executive duties by lengthy correspondence. This solution appears practical to your delegate since, in the final analysis, the Bureau, as an administrative body, implements the policies of the Council which includes as members delegates from all national groups.

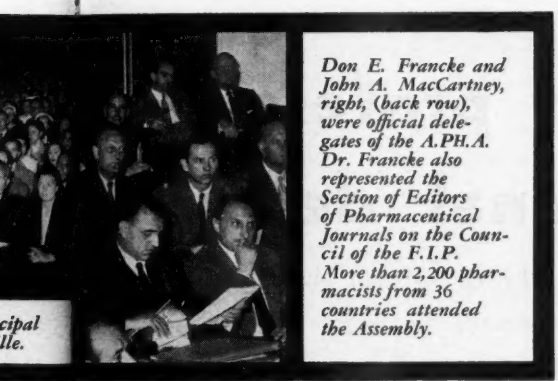
M. Frederic Dupont, president, Paris Municipal Council, addressed reception at Hotel de Ville.

The next order of business of the Council was consideration of a number of proposals for the formation of sections within the International Pharmaceutical Federation. Up to this time, the F.I.P. has had only one section, namely, a Scientific Section, and proposals had been made that various sections be formed, similar to the sections of our own A.PH.A. After considerable discussion, the Council approved proposals for the formation of sections on: Pharmacognosy, Hospital Pharmacy, Military Pharmacy, Pharmaceutical Editors, History of Pharmacy, and Manufacturing Pharmacy. A proposal that a section limited to proprietors of retail pharmacies be formed was made by the Austrian delegation, and this proposal stimulated lively debate.

National Health Insurance Schemes

The Austrian delegation was deeply concerned, as were the majority of the European delegates,

with the problem of national health insurance schemes, which cut sharply into the income of the retail pharmacist because of the fact that the state, or nation, through the health insurance schemes, dictated the retail price which the pharmacist might charge for filling the prescriptions of members of the health insurance schemes in the various countries. There was a lively debate on the advisability of a formation of such a section within the F.I.P., and it was obvious that a section devoted to the economic problems of pharmacy was needed. However, your delegate felt that the formation of a section limited exclusively to proprietors of retail pharmacies would exclude others who had a deep interest in the economic problems of pharmacy, and would tend, eventually, toward a break-off of this group into a totally separate association. Consequently, your delegate cited to the Council the experience of the A.PH.A. in past years, and recommended that a section of retail pharmacy owners was inadvisable. Conversely, it was recommended that there be consideration of the formation of a section similar to our A.PH.A. Section on Economics, and that care be taken to insure that anyone interested in the economical aspects of retail pharmacy be permitted to join this section, thus avoiding a section limited exclusively to the owners of retail stores.



Don E. Francke and John A. MacCartney, right, (back row), were official delegates of the A.PH.A. Dr. Francke also represented the Section of Editors of Pharmaceutical Journals on the Council of the F.I.P. More than 2,200 pharmacists from 36 countries attended the Assembly.

Impact of State Insurance Systems

The discussion on pharmaceutical economics was very lengthy, and was, as previously noted, stimulated by the widespread development of health insurance systems in the various European countries. It is obvious that the growth of these schemes has resulted in the various governments entering active competition with the independent retail pharmacists and, in those cases where the retail pharmacist still retains the privilege of dispensing medicine, a much lower gross and net profit from his operation. The retail pharmacist in these countries is, therefore, quite justifiably alarmed over the growth of these practices, and the resultant loss to his income.

The F.I.P. already has a committee appointed to study this question, and the final conclusion of the Council was that a section of retail pharmacy owners was not needed at this time, but that the committee should further study the problem and make appropriate recommendations to the F.I.P., with a view to general recommendations to the governments of the countries involved.

Problems of Terminology

A lively discussion continued for some time on the problem of "druggists" and the merchandise which they are, or should be, permitted to handle. It is important to note here that the use of the term "druggist" is not the same as it would be in the United States, since in most European countries this term is used to define what we would call patent medicine stores in the United States. It is interesting here to note that the Council had great difficulty in arriving at a mutually acceptable definition of the term "patent medicine," and the entire problem was referred back to the Commission on Specialties for further study and an attempt to obtain a satisfactory definition of this term. I am sure that the members of the A.PH.A. will, at this point, reflect that the problems of the F.I.P., so far discussed, have a strangely familiar sound to those of us in the United States who have had these very same problems with us for many years.

Constitutional Amendments

The delegation from Belgium proposed an amendment to the Constitution which would change the number of delegates to the Council from each country, and the Council agreed that they will accept, as members, delegates from one or more national associations from any one country, provided that the total Council delegation is not increased thereby.

The Swiss delegation also submitted proposals having to do with Council membership, and one of their proposals was accepted. This proposal would limit membership to those individuals who were registered pharmacists.

The next order of business was a lengthy consideration of changes in the Constitution and

(Continued on page 724)

Dr. Melvin A. Casberg (left), Assistant Secretary of Defense, and Colonel T. Bedwell, Jr., USAF, examining armored vest.

the health professions and the national defense

by Dr. Melvin A. Casberg

Assistant Secretary of Defense for Health and Medical Affairs

One of the things that strikes an individual who is familiar with the Department of Defense from the standpoint of health and medicine is the global nature of the problem which faces us. All one has to do is to recount the episode of a soldier during the tight period in Korea who was flown from Travis Air Force Base, San Francisco, went into combat, was wounded and back in Letterman General Hospital in San Francisco, a veteran with a Purple Heart, all within a period of 12 days. If we are to control this problem of distance, medically speaking, we must have methods of conveyance and methods of controlling our logistics. Not only that, but we are thrown side by side with a great multitude and variety of nationalities who are bearing arms by our side.

About a year ago, General Ridgway requested that I come to Paris to call a meeting of the Surgeons General of the NATO countries. The problem was realistic there; simple, basic problems such as being certain that Belgian stretchers fit in French ambulances and that the French stretchers fit in American airplanes, because the transferring of the wounded soldier from stretcher to stretcher is not conducive to his eventual recovery.

While talking to me, General Ridgway described an episode illustrating one of the difficulties experienced from the standpoint of health where a variety of nationalities are fighting side by side. He said he was making rounds in a hospital in Tokyo and came across a Turkish soldier who understood no English whatsoever. He tried to talk to him, but finally went out and discussed the case with his doctor. The doctor related this episode. The Turkish soldier had some type of injury in the shoulder area which had done a certain degree of damage to the nerves going down into the arm. The doctor was attempting to determine just which nerves were involved and had a long hatpin with which he was trying to

determine sensation. The Turk was very, very confused. He didn't know what the doctor was trying to do and finally thought that he would bring this whole thing to an end because he felt that the doctor was trying to test his ability to stand pain. He took the hatpin, jammed it through his hand and held it up and said, "Me Turk."

The language problem is probably not the most serious, but certainly while I was in Korea during this year it was extremely difficult to see patients and try to find out what was the matter with them when there was a language barrier.

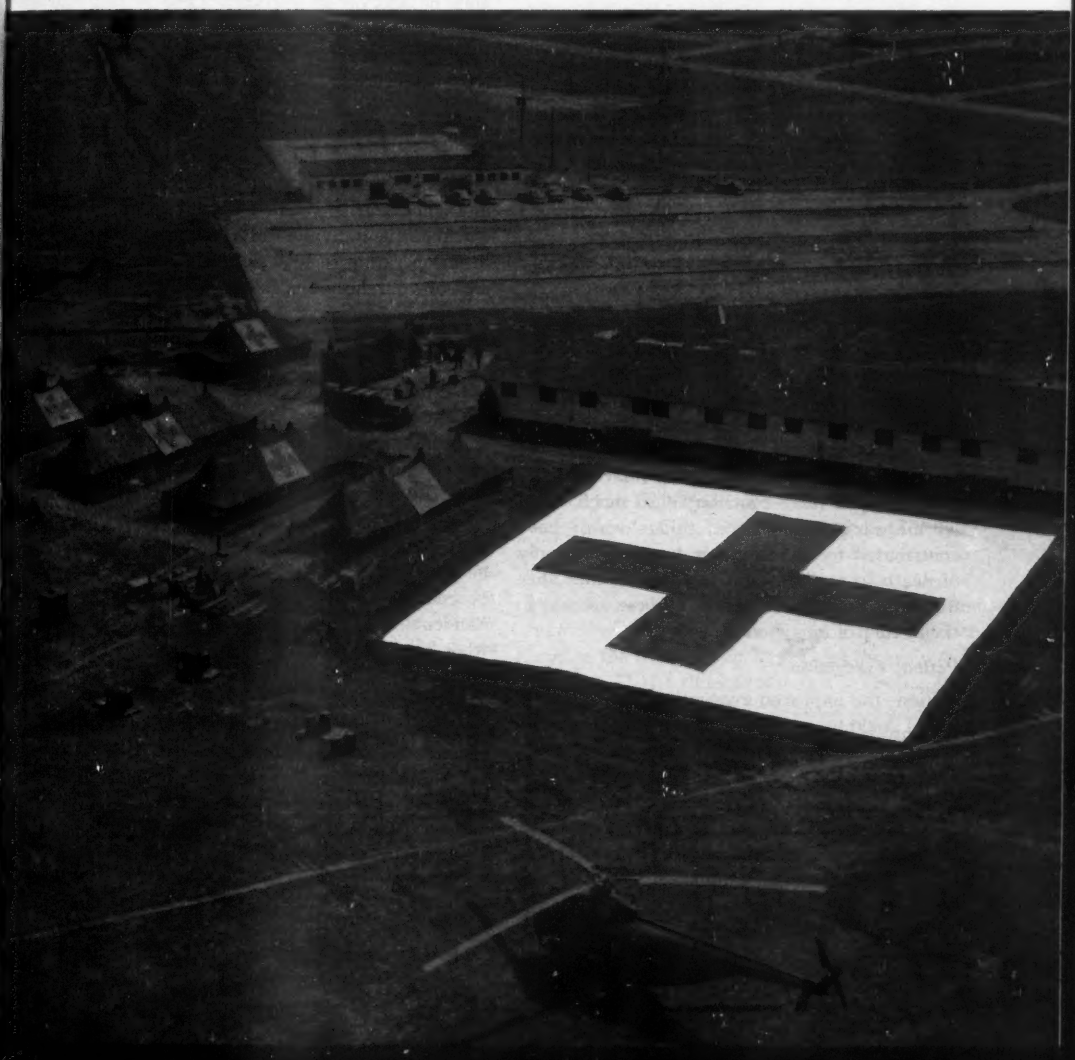
During April of this year, I traveled some 25,000 miles in the Pacific area (including Alaska), checking on military medical installations, which definitely illustrates the global nature of our medical mission. This doesn't consider at all the other areas of the world where we have troops and medical installations scattered.

War-Time Mortality Cut

I hate to go into statistics but may I quote a few, which I consider pertinent and important. I quote mortality rates from disease in our Armed Forces starting with the Mexican War—of every 1,000 soldiers in uniform during a period of one year in the Mexican War, a little over 100 died of disease. In the Civil War, it was 75 per

(Continued on next page)

Personnel of First Aeromedical Group practice loading equipment of a 50-bed field hospital for its forthcoming airlift from Donaldson Air Force Base, S.C., to Altus AFB, Okla. Troop-carrier aircraft of the Eighteenth Air Force flew the hospital's 36,740 lbs. of equipment to its new station on August 14. (Official U. S. Air Force photo.)



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1,000; in World War I, 16; in World War II, 0.6; and in Korea, 0.5.

It would seem impossible that we fought in a country where diseases with which we were comparatively unfamiliar are endemic, and yet only one individual died from disease in the Armed Forces during the Korean episode for every 2,000 in uniform per year.

These are things to which pharmacy has contributed. Certainly the pharmacists with their research, their personal devotion, and materials supplied have contributed to this astounding bit of statistics.

Now, let's go to the wounded in action. You know it was not until World War I that we lost more men during a war from battle injury than we did from disease. Up until World War I, more people died of disease in our campaigns than died of battle injury. In World War I, the tide changed.

The definition of a person wounded in action does not include everyone who is hit but only those who receive medical treatment, even if it is just from the medical-aid man in the forward area. This eliminates those who are killed in action. Let's compare statistics in the same wars. In the Mexican War of every 100 wounded in action who survived the initial impact, 15 died. In the Civil War, 14 died. In World War I, 8 died. In World War II, 4.5 died and in Korea only 2.3 died of every 100 soldiers wounded in action. Sometimes statistics are dry, but to me these statistics stand out vividly.

This is not something that has developed routinely, but it is a composite of a tremendous number of things. I have already mentioned the drugs in which you are extremely interested and to which you have contributed so much. But let me name a few other things which have contributed to this dramatic lowering not only of death from disease but actually of mortality for those wounded in action. These are not in their order of importance.

Patient Evacuation

First, the improved evacuation of patients—I wish I could take each one of you along the route of patient evacuation for it is a fascinating thing. I was at the main line of resistance in Korea the middle of April and watched from the command post the shelling of the enemy, watched the wounded who were brought by stretcher for 30 to 50 yards to an ambulance jeep, the ambulance jeep dashing rapidly over a rough road—probably the hardest part of the entire trip because it was under open vision of the enemy—about a half mile around a hill to where I was at the battalion aid station. In this battalion aid station was a doctor with his aides; whole blood was available within 15 minutes of knowing that a wounded man was coming. A phone call was made back to the mobile surgical hospital, and a helicopter thrashed its way up the valley very close to the ground to keep out of visibility of the enemy, settling down right outside the battalion aid station.

As the patient was placed in the mummy case (as I call it) attached to each side of the helicopter, he continued to receive a whole blood transfusion which was initially started at the battalion aid station, and thus he was transported back to the mobile surgical hospital. Within a period of about one hour, this individual was in the hands of not just some doctor—and I do not say that disparagingly at all—but in an hour he was on an operating table getting the best surgical, neurosurgical, orthopedic, plastic, thoracic care that is available in the world. Now, these are the things that have contributed to the lowering of this mortality rate.

Then, let's take him from there, say from the 1st Marine Division. He was flown from the Marine Division to the hospital ship *Consolation* anchored in Inchon Harbor, landed on the hospital ship, and then the individual Marine received surgery in an operating room which would do credit to any of your hospitals in this country. Rapid, smooth, painless evacuation of patients, in my estimation, is one of the big contributing factors which is saving lives.

During the Korean episode there were 400,000 patient evacuations. A patient evacuation by definition is that phase where the patient is loaded into a plane, flown a certain distance, and then unloaded—in other words, the trip. It might take three or four patient evacuations to get a patient from the combat area to Tokyo or back to the States. But in 400,000 patient evacuations, only five died because of plane accidents. Remember, this was during the days when we retreated, when we snuck in, landed planes on fields which were pitted with enemy artillery fire, rushed off, having no time to check on planes. Four hundred thousand patient evacuations with five deaths, and those five deaths were a mistake because the hospital plane was on a field and a foreign flier in a jet who didn't understand English misunderstood the control tower signals and came in crashing into the plane on the ground.

Quick Mobility

Here is another bare, cold piece of statistics;

Airman of the First Aeromedical Group fastens a pallet to a hovering H-19 helicopter participating in the airlift of a 50-bed hospital from Donaldson Air Force Base, S.C., to Altus AFB, Okla. The move was accomplished by aircraft of the Eighteenth Air Force's 314th Troop Carrier Wing, Sewart AFB, Tenn. The helicopter flew the hospital's equipment to C-119's waiting on the ramp. (Official U.S. Air Force photo.)

but here is another thing which has contributed to the saving of lives and the lowering of mortality rates.

In mid-August, I spent a day at Donaldson Air Force Base, outside Greenville, S.C., where I witnessed an amazing military feat. This operation consisted of dismantling a 50-bed hospital which was set up in tents, moving the entire installation, and setting it up 1,000 miles away in Texas within a matter of a few hours. Prior to the operation the patients were served breakfast and given their morning medications. At my signal the complete hospital unit including beds, mattresses, operating room, generator, and everything else was disassembled and placed in containers which were carefully loaded into large nets similar to those used in loading cargo on and off ships. These nets were picked up by the helicopters by the use of a large hook which was affixed to the net by a man underneath the ship, and flown five miles where they were reloaded into five flying boxcars which transported the entire hospital unit to Texas. The same hospital was reassembled in time to serve the patients' supper that same night. This is the type of mobilization which we should face.

We have a global problem and it is things like these that save these lads who would not come home if it were not for evacuation. When I speak of evacuation, it is a two-way thing. It is a mobility of personnel. It is the helicopter that takes the surgeon to a little outpost to supervise surgery. It is the helicopter which brings him back and lets him touch three or four points where his care is needed. This is all involved in patient evacuation.

I will not go into the drug phase with which you are so familiar; I would be carrying coals to Newcastle to say very much about it here. Certainly the drugs, the antibiotics, and the broad spectrum of antibiotics that are available now have contributed greatly to the saving of lives. The antimalarial drugs have also controlled malaria in these tropical countries. Remember, we do not know where trouble is going to break out. It may break out where yellow fever is predominant. It may break out in Indo-China. The medical forces must be prepared, and that is where they depend on you for the latest in drugs which can control and keep these boys healthy.

Blood and Plasma Expanders

While I was in Korea, I was very interested in dextran. We in the Armed Forces are in the process of fractionating our plasma stockpile because of the hepatitis problem. We are getting gamma globulin out of it which we are happy to turn over to the authorities who will release it for the modification of polio. We will have albumin which at least will not transmit hepatitis and we are supplementing our stockpile at the present with dextran. When other plasma expanders are developed, those also will be considered; but dextran has been used in the front on many, many cases now and the evidence coming out is such that we are using it routinely and effectively throughout combat areas with very good results. It is being administered as was plasma previously —that is, one dextran with one transfusion.

Blood has been available, and at no time, despite what we have heard, have we been short of blood in Korea. You see there is a lead time in getting blood from here to Korea, and for that lead time we have developed a bleeding center in Tokyo. When the fighting gets hot, it takes us five to seven days (it used to be 12 days) from the time blood is drawn in the United States until it reaches the front line in Korea and the wounded soldier. That I think is a record in itself. But it takes a lead time and we have the Tokyo bleeding center to fill that gap. Unfortunately, publicity went out that the boys weren't getting blood. There was nothing valid in this release. There was always blood available. We really used blood in combat.

I was talking to Captain Howard who was with one of our research teams in Korea and he said recently three soldiers were given 42 units of

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blood each in 24 hours. That was almost ten complete replacements of the individual's circulating blood volume. Those are the things that are saving lives and cutting down our mortality rate. I could go on at quite some length on this, but I will pass on to something else.

High Quality of Professional Care

I have been amazed at the high caliber of professional care of all of the health professions. My field is surgery. I have taught it and practiced it as a profession. I have been amazed at the caliber, the high caliber of surgical care that is given the wounded right beside the belching tanks, in fact where the tent shakes every once in a while from a salvo from a tank that is moving by. The highest level of thoracic, neuro, general surgery, and plastic surgery is done in a tent with the mud flowing around it, with research units functioning in the same area. You know it is all very well to take so many dogs and so many partially healthy people and run tests on them about blood concentrations, dilutions, and so forth, but we have never before had research where the fighting was going on. The soldier who is dehydrated, who is afraid, who has not been on proper rations, who has lost sleep, is wounded and brought in, and as soon as he comes in this research team goes into action. It is the most amazing thing to walk into a tent with mud and water flowing and tanks passing by and see them getting potassium determinations. These research teams are going into action and they are finding out a great deal—a great deal which is going to be of value not only to the military, but if—and God forbid—the civilian population of this country should ever be in a position where large mortality rates are to be expected.

I walked into one tent about 13 miles behind the front and watched an artifical kidney in action. The artificial kidney is something that one does not find in every medical school these days and in every house and palace of celestial medical thought in this country. There, right in that area, I watched a badly wounded soldier who looked as white as a sheet, in fact his freckles looked like raisins on a white tablecloth, he was so white. The toxic elements in his blood were piling up because his kidneys had gone into shock, and there was this team under canvas using the artificial kidney which takes blood out of the artery when these toxic elements pile up. He is put in for a six-hour period and the blood goes through a dialyzing membrane which revolves through a bath of normal saline and other constituents, and by the process of dialyzing these toxic materials go into the bath; the bath is changed every two hours, and finally the toxic elements in the blood fall so that he can survive for another four or five days and possibly go in again.

Dr. Ravdin, Professor of Surgery at the University of Pennsylvania, was with me, and as Ravdin and I stood there, he leaned over and said, "Mel, the man will never make it." We received a letter after we got back to the States that ten days after we had seen this boy there, he was sitting up eating and reading his mail.

Of course, people will say there is a point of diminishing returns. The Communists would never do that. Why? Because there were two doctors and two nurses involved for a six-hour period in saving this individual's life, and that just is not in the program for communism. But it is done right there and my heart swelled with pride as I thought that here was a team, here was an army, here was a representative army of the nation who thought enough of one individual G.I. to go to the trouble of bringing to the front apparatus such as this to save one individual life.

Vascular surgery has advanced by leaps and bounds, even since World War II. Roughly estimating, it will cost the government approximately $80,000 in payments to an amputee during his lifetime. Now, with injuries of the large vessels which in many cases formerly resulted in amputations, the vascular surgery is done and the leg is saved—and here again right at the front line because time is of the essence.

In August, I dropped in at Walter Reed to see some vascular surgery done on the carotid artery of a soldier who had been shot through the neck in Korea and had developed an arteriovenous fistula between the carotid artery and the jugular vein. There was nothing to it at all. They just removed the arteriovenous sinus, stripped the artery down, brought the ends together, sewed them together, watched the blood pumping through, and then closed it up.

Vascular surgery is improving, not because the simple technique has improved; actually in my estimation some of our old professors of surgery, as far as the delicate technique of surgery was concerned, knew a lot more than the people know today. But it is the ancillary things that contribute, the anticoagulants and other developments and supplies from the pharmaceutical profession. For instance, in thoracic surgery it is not that thoracic surgery as a technique has improved, but the anesthetists now can give anesthetics which permit the opening of the

chest cavity, which sustain life on the operating table under deep anesthesia for a matter of two, three, four hours. Those are the things that are contributing.

I would be the last to say that this was progress made primarily by the Armed Forces. It is progress made conjointly by civilian medicine, the health profession, and the military.

The intramedullary nailing is something developed by the Germans, by Dr. Kuntscher—the Kuntscher nail. Toward the end of World War II, we began to hear amazing reports of this nail. Some of our prisoners were coming back and we would take X-rays of fractured femurs and there would be a nail going all the way down the medullary shaft of the femur from one end of it to the other. There were dire predictions as to what would happen to their blood count and so on but eventually, we found it working very successfully.

At the Yokosuka Naval Hospital in Japan, it was amazing to see intramedullary nails placed in the femur of those men who had fractures of the femur, even a compound fracture, and with the protection of antibiotics in two or three weeks to see them walking along on crutches with that fractured femur.

It is technical advances such as these which are contributing to this lowering of mortality rate. Remember the statistics I quoted.

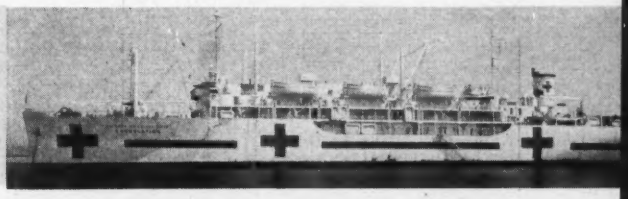
Body Armor

I am going to close with another factor which toward the end of the Korean episode lowered the mortality statistics tremendously. Body armor has been something that warring nations have played with for some time, whether it was the aborigine hottentot and his shield, the knights of King Arthur's day, the helmet of World War I, or the group body armor of our gun emplacements on naval vessels. Body armor has been something that has tickled the imagination of people in combat. We found from our statistics in World War II that some 80 per cent of the wounds sustained were due to low velocity fragments, that is, hand grenades, mortar fragments which have a basic low velocity, and only about 20 per cent (these are rough figures) were due to high velocity bullets.

Furthermore, we found that of those wounded in action 80 per cent of the injuries were of the extremities and only 20 per cent of the body trunk, because the mortality rate was much higher in trunk injuries. So we began to experiment with body armor. The Marines' armor is a plastic, fiber-glass type of body armor with actual small plates like a turtle shell overlapping. The Army's is a ply nylon body armor.

We were rather hesitant at first whether the boys would wear it as it weighs approximately nine pounds. There are three sizes—small, medium, and large—and they are very hot. But we found there was no trouble at all. The boys will lose anything else but they don't lose their body armor. This body armor will stop anything that has a velocity of under 1,300 feet per second, which includes practically all mortar fragments. You have even heard of soldiers throwing themselves on a hand grenade and surviving. But we are coming up with some horribly crippled and maimed soldiers, and the reason is obvious. We lost those in World War II; they didn't live. You get a grenade or a mortar going off with the body protected, and you have some very badly mangled extremities as a result.

Actually, there are as many quadruple amputees from Korea as in all of World War II and the body armor is the thing that has contributed to that. Whereas we have made progress in saving life, we have presented ourselves with another problem, and that is the problem of extremities which are seriously damaged.



Hospital Ship, U.S.S. Consolation

I would like to close by saying again that I think the health professions can be very, very proud of the record in Korea, a war fought across an ocean where logistics was a serious problem, where the terrain was one of the most God-forsaken terrains I have ever seen; fought in an area where diseases, endemic and otherwise, were such we were afraid we might not be able to control them. But even with that, we have come out with a disease rate and a mortality rate that is lower than that of any major war in which we have fought.

PHARMACEUTICAL VEHICLES: a Study of Their pH and Incompatibilities (1)

by Clifford W. Riegler, Jr.,* and J. Leon Lichtin†

IT HAS long been known that certain pharmaceutical vehicles are acidic or basic and that this reaction is a cause of a number of prescription incompatibilities. Although cherry syrup has been studied and its pH has been reported (1), there is comparatively little data available regarding the pH of the commonly used vehicles and the specific incompatibilities produced by those vehicles. Incompatibility information about a vehicle is significant, but it is equally important to know in which vehicle one can

(*Continued on page 708*)

Presented before the Section on Practical Pharmacy, A. PH. A. Convention, Philadelphia, Pa., August, 1952.

* Senior Student, Cincinnati College of Pharmacy, Cincinnati 3, Ohio.

† Associate Professor of Pharmacy, Cincinnati College of Pharmacy, Cincinnati 3, Ohio.

TABLE I.—THE pH OF PHARMACEUTICAL VEHICLES AT VARIOUS DILUTIONS

Vehicle[a]		100 %	90 %	75 %	50 %
Syrup					
Acacia U.S.P.		4.8	4.7	4.7	4.7
Althea N.F.		5.1	5.1	5.1	5.1
Bromides N.F.	Man. 1	4.4	4.4	4.5	4.5
	Man. 3	4.3	4.3	4.3	4.4
Cherry U.S.P.	Man. 1	3.8	3.9	4.0	4.1
Eriodictyon	Man. 2	6.8	6.8	6.7	6.7
Ginger U.S.P.		8.1	8.0	8.0	7.8
Glycyrrhiza	Man. 1	6.3	6.3	6.2	6.2
Glycyrrhiza U.S.P.	Man. 1	6.0	6.0	6.0	6.0
	Man. 3	6.4	6.3	6.2	6.1
Orange	Man. 1	2.2	2.2	2.3	2.4
	Man. 2	2.2	2.2	2.3	2.4
Raspberry	Man. 5	3.2	3.2	3.3	3.3
Comp. Sarsaparilla	Man. 3	5.0	5.0	5.0	5.0
Simplex U.S.P.		6.7	6.6	6.4	6.3
Tolu U.S.P.	Man. 1	8.4	8.3	8.3	8.0
Tolu	Man. 1	5.4	5.2	5.2	5.2
Tolu	Man. 3	5.3	5.2	5.2	5.2
Comp. White Pine	Man. 1	6.5	6.5	6.4	6.3
Wild Cherry U.S.P.	Man. 1	4.6	4.6	4.7	4.8
	Man. 2	4.6	4.6	4.6	4.7
Wild Cherry	Man. 1	4.2	4.3	4.3	4.3
Elixir					
Aromatic U.S.P.	Man. 1	7.0	7.1	7.2	7.2
	Man. 3	6.9	6.9	7.0	7.1
Aromatic	Man. 1	3.6	3.6	3.6	3.6
Benadryl	Man. 1	7.2	7.2	7.2	7.3
Benzaldehyde Comp. N.F.		5.8	5.8	5.8	5.8
Bromides Three	Man. 1	3.7	3.7	3.7	3.8
	Man. 3	5.3	5.3	5.3	5.3
Cardamon Comp. N.F.		7.6	7.6	7.5	7.5
Catnip and Fennel N.F. VIII					
	Man. 4	7.9	8.0	8.0	8.0
Pepsin Lactated	Man. 1	4.7	4.7	4.7	4.7
	Man. 3	4.2	4.2	4.2	4.2
Phenobarbital U.S.P.	Man. 1	5.3	5.3	5.4	5.4
	Man. 3	5.4	5.4	5.5	5.5
Propadrine	Man. 3	5.8	5.7	5.7	5.7
Sod. Bromide N.F.	Man. 1	6.8	6.8	6.8	6.8
Thiamin HCl	Man. 1	2.8	2.8	2.9	2.9
Vitamin B Complex	Man. 1	4.6	4.6	4.7	4.8
Essence Pepsin	Man. 1	4.2	4.2	4.2	4.2
Liquid Citralka	Man. 1	4.6	4.8	4.8	4.9
Liquid Taka-Diastase	Man. 1	6.4	6.4	6.4	6.4

[a] The official vehicles are designated as such, the others are of non-official quality.

TABLE II.—INCOMPATIBILITIES OF SODIUM PHENOBARBITAL WITH VARIOUS PHARMACEUTICAL VEHICLES

Vehicle[a]		Sodium Phenobarbital (Concentration in Mg./4 cc.)	Description of Precipitate[b]	Time of Precipitation
Bromides Syrup N.F.		16	1	1 week
90%		32	2	1 week
		96	3	1 day
50%		16	0	.....
		32	0	.....
		96	1	1 day
Cherry Syrup U.S.P.		16	1	1 hour
50 and 90%		32	2	1 hour
		96	4–5	Immediately
Orange Syrup	Man. 1	16	1	Immediately
	Man. 2	32	2	Immediately
50 and 90%		96	3	Immediately
Raspberry Syrup	Man. 5	16	1	1 hour
		32	2	1 hour
50 and 90%		96	4–5	Immediately
Compound Sarsaparilla Syrup	Man. 3	16	1	4 weeks
		32	2	2 weeks
90%		96	2	1 week
50%		16	0	.....
		32	0	.....
		96	1	4 weeks
Wild Cherry Syrup	Man. 1	16	1	4 weeks
		32	1	1 day
90%		96	4	1 day
50%		16	0	.....
		32	1	4 weeks
		96	2	2 days
Benadryl Elixir	Man. 1	16	6	2 weeks
50 and 90%		32	6	2 days
		96	6	1 day
Compound Benzaldehyde Elixir N.F.		16	5	2 days
		32	5	2 days
90%		96	5	2 days
50%		16	0	.....
		32	0	.....
		96	0	.....
Pepsin Lactated Elixir	Man. 1	16	1	1 week
		32	3	1 day
50 and 90%		96	4	1 hour
Thiamin HCl Elixir	Man. 1	16	1	1 day
		32	3	1 day
90%		96	3	1 hour
50%		16	1	1 day
		32	1	Immediately
		96	2	Immediately
Three Bromides Elixir	Man. 1	16	2	1 day
90%		32	2	Immediately
		96	3	Immediately
			5	1 week
50%		16	1	2 days
		32	1	Immediately
		96	3	Immediately
			5	1 week
Vitamin B Complex Elixir	Man. 1	16	0	.....
		32	1	2 days
50 and 90%		96	2	1 day
Essence Pepsin	Man. 1	16	2	1 day
50 and 90%		32	3	1 hour
		96	4	Immediately
Liquid Citralka	Man. 1	16	2	Immediately
50 and 90%		32	3	Immediately
		96	4	Immediately
Liquid Taka-Diastase	Man. 1	16	1	1 week
90%		32	1	2 days
		96	2	2 days
50%		16	0	.....
		32	0	.....
		96	0	.....

[a] Vehicle: The percentage by volume is given, the remainder is preserved distilled water.
[b] Description of Precipitate: 0—No reaction. 1—Very slight precipitate. 2—Light precipitate. 3—Moderate precipitate. 4—Heavy precipitate. 5—Color reaction. 6—Oil globules.

TABLE III.—VEHICLES WHICH ARE SAFE FOR USE WITH SODIUM PHENOBARBITAL AND SODIUM SALICYLATE

Acacia Syrup U.S.P.	Tolu Syrup Man. 1
Althea Syrup U.S.P.	Aromatic Elixir U.S.P.
Eriodictyon Syrup Man. 2	Aromatic Elixir Man. 1
Ginger Syrup U.S.P.	Compound Cardamon Elixir N.F.
Glycyrrhiza Syrup U.S.P.	Catnip and Fennel Elixir N.F. VIII
Glycyrrhiza Syrup Man. 1	Propadrine Elixir Man. 3
Syrup U.S.P.	Sodium Bromide Elixir N.F.
Tolu Syrup U.S.P.	

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safely dispense a certain prescription ingredient. A study has, therefore, been undertaken of the pH of a number of vehicles, which were from difference sources and were tested at different dilutions. These different dilutions were used in order to simulate normal prescription laboratory technique and also to differentiate between the incompatibilities of various concentrations of the vehicles.

Experimental

The vehicles whose pH was determined were tested at the following dilutions: 100 per cent, 90 per cent (vehicle), 75 per cent, and 50 per cent. The balance of the dilution consisted of distilled water containing in each liter 313 mg. methylparaben and 188 mg. propylparaben. A summary of the pH of the vehicles of the various dilutions is contained in Table I.

Drugs used to test the compatibilities of the vehicles were sodium phenobarbital and sodium salicylate. The concentrations of the sodium phenobarbital used in each 4 cc. of the tested vehicle were 16 mg., 32 mg., and 96 mg. The vehicles were used in dilutions of 90 per cent and 50 per cent, the balance being distilled water containing the same concentration of the paraben esters as mentioned above. The sodium phenobarbital was dissolved in the aqueous portion of the diluted vehicle. To this solution was then added an amount of pure vehicle which produced the desired final vehicle concentration. The volume of the compatibility test mixtures in all cases was 100 cc. These mixtures were then allowed to stand at room temperature and were observed for the presence of any precipitates or other changes. Observations were made at the following intervals: immediately upon mixing, and thereafter at one hour, one day, two days, one week, two weeks and finally four weeks. The incompatibilities of sodium phenobarbital as determined by the above technique are summarized in Table II.

There were a number of vehicles which were compatible with sodium phenobarbital even at its highest concentration of 96 mg. per 4 cc. The vehicles, therefore, in which sodium phenobarbital can be dispensed at concentrations as high as this are summarized in Table III.

The concentrations of the sodium salicylate used in each 4 cc. of the tested vehicles were 0.3 Gm. and 0.6 Gm. Only one concentration of vehicle was used, that being 75 per cent pure vehicle and 25 per cent distilled water containing the paraben esters as described previously. The same technique was used in performing these compatibility tests as was used for the sodium phenobarbital. Observations were made at the same time intervals. The compatibility tests of sodium salicylate can be summarized as follows: The sodium salicylate was found to be compatible in both concentrations with all the vehicles tested with the exception of the pepsin-containing elixirs—compound pepsin elixir and pepsin and rennin elixir.

Summary and Discussion

Compatibility tests using these vehicles have been performed using sodium phenobarbital and sodium salicylate. A list of vehicles has been included in which sodium phenobarbital and sodium salicylate can be dispensed.

The pH has been determined of a number of pharmaceutical vehicles at varying dilutions. The presence of 10 per cent, 25 per cent, or 50 per cent of water did not alter the pH of any of the vehicles more than 0.5 pH unit.

The pH of some of the non-official samples of the vehicles differed from the pH of the same vehicles when they were of official quality. This fact should be kept in mind when prescriptions are compounded and dispensed.

The pH of some of the vehicles was different from the values which were expected. Further investigation is now being conducted along these lines.

Acknowledgment is made of the vehicles contributed to this study by Parke, Davis & Company, of Detroit, Mich., and Sharp & Dohme, Inc., of Philadelphia, Pa.

REFERENCE

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PRESCRIPTION trends

by William T. Doyle*

In 1939 U.S. drugstores had $165,700,000 income from prescriptions; 1952 saw this figure soar to $815,000,000. It is significant to point out that in 1939 prescriptions were only 10.6 per cent of total store sales, while in 1952, the percentage jumped to 20.1 per cent. This tremendous dollar increase in the professional side of pharmacy calls for a careful evaluation of the reasons for this phenomenal growth. Certainly, the fact that the average prescription price increased from 91 cents in 1939 to $1.98 in 1952 is hardly an answer to the remarkable upward trend of the prescription business.

For many months now, we have been studying trends and what makes them. During this time, we have traveled across the entire breadth of the United States, and have discussed the subject with owners of almost 100 busy prescription pharmacies. Our sales force and a market-research organization have given us the benefit of practices of another 418 pharmacies. In addition, through the cooperation of our representatives and field managers, we have been able to learn the attitudes and opinions of over 1,000 physicians as well.

This paper is based in a large measure on the results of these field reports plus data supplied by Dun & Bradstreet, the Research Society (a nonprofit pharmaceutical market-research firm of Boston, Mass.), *Drug Topics*, and the Metropolitan Life Insurance Company.

Population Pattern

At the present time, the U.S. population is estimated at 160,000,000 which is a sharp increase from the 130,877,000 of 1939. The experts say the outlook for continued growth is bright, and we shall probably reach the 200,000,000 mark well before the end of the century.

In the past five years, more than 18,500,000 babies were born in America which is an average of a little under 4,000,000 new additions a year. Current estimates indicate 1953 alone promises to show the highest increase in births in our entire history—over 4,000,000!

- . . .The number of deaths in 1950 totalled 1,456,000 or 9.6 per 1,000 population.
- . . .Admissions to registered hospitals exceeded 17,000,000.
- . . .During the past decade, the number of families increased by 25 per cent—from approximately 32,000,000 to 40,000,000.
- . . .1953 shows an average annual-income rate of $3,300 per family unit which is an all-time high. There are close to 62,000,000 workers in the civilian labor force at the present time.
- . . .19,000,000 married women are working. This constitutes a big potential market, although a less permanent one; as we all know when recessions occur in the economic cycle, married women are affected first.

The age distribution of the population has been undergoing significant changes. As a consequence of the recent rise in the birth rate, the proportion of children under five years of age has increased from 8.0 per cent in 1940 to 10.8 per cent of the total population in 1950, thereby reversing the trend in evidence since 1860. The percentage of older people has been rising steadily for an even longer time. In 1950 the proportion at ages 65 and over was 8.2 per cent—exactly twice that at the turn of the century.

(Continued on next page)

Presented before the Section on Pharmaceutical Economics, A.PH.A. Convention, Salt Lake City, Utah, August, 1953.

* Vice-President, Organon, Inc., Orange, N.J.

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From these figures, it is easy to see that our prosperity is built on the solid foundation of an expanding population that is working hard, making money, and interested in buying products and services that will keep them healthy and give them more time to enjoy themselves.

Your Customer

It is a rule of thumb among many sales executives that 25 per cent to 30 per cent of a sales force bring in 65 per cent to 70 per cent of the sales volume. A close analysis of drugstores in any community will reveal that a very small percentage of the total number get the cream of the business. When we asked "why," here is what we learned.

I. **Professional Services.** When the customer telephoned or visited the store, he was given polite and prompt attention. Above all, the professional dignity of the pharmacy encouraged confidence. It is coincidental and interesting that the recent N.A.R.D. survey showed that 66 per cent of the customers interviewed stated that they preferred to buy their drug products in a pharmacy because they have "faith in the druggist's personal advice."

II. **Adequate Stocks.** All but four of the 500 pharmacies stressed the importance of having adequate inventory. Over one-third of the drugstores believed they had built their success on a *well-managed inventory.* We were very impressed with the excellent and modern inventory-control systems that even three of the two-man stores had. It was pointed out by practically all that fresh-looking merchandise, well displayed, helps sell itself. It was stressed, time and again, by the successful owners that a pharmacy should not tie up limited capital in too much dead, slow-moving merchandise. Of course, many pharmacy owners pointed out that the very nature of a drugstore requires some products on which the demand may be limited and sporadic. However, these should be screened carefully.

III. **Fair Pricing.** It was surprising that over 60 per cent of the pharmacies voiced the opinion that prices should be fair to both the public and the pharmacist—this seemed especially evident in the case of prescriptions. Several incidents were recited by pharmacists of competitors who were pricing the prescriptions so high that customers were taking their business elsewhere. Others pointed out the tendency of some to take all the profit out of some prescription preparations. The cortisone situation was cited the most frequently as an example of some pharmacies actually losing money on cortisone in order to get other customer business.

It is evident that the retail drug business is prosperous. However, there are a few danger signs which are worth while pointing out. In the first six months of this year, Dun & Bradstreet report 59 retail drugstore failures involving liabilities of $2,084,000. At the present rate, the number of drugstore failures for 1953 will total approximately 118 to 120. Below is a table showing retail drugstore failures from 1934 through 1952.

RETAIL DRUGSTORE FAILURES, 1934–52

Year	Number	Liabilities
1934	640	$6,887,000
1935	591	5,082,000
1936	438	3,619,000
1937	328	2,786,000
1938	460	3,812,000
1939	539	4,349,000
1940	518	3,528,000
1941	464	3,937,000
1942	450	3,155,000
1943	120	763,000
1944	26	263,000
1945	12	134,000
1946	11	49,000
1947	28	369,000
1948	50	904,000
1949	116	2,232,000
1950	116	1,714,000
1951	108	1,845,000
1952	107	1,908,000

It is also interesting to note that the point at which retail drugstores are most vulnerable to bankruptcy is during the first five years. It is during this time that the greatest percentage of failures occur. If a retailer is successful in getting beyond the five-year period, the chances are excellent that he will survive the battle of competition. Below is a chart showing the age percentage of drugstore failures by the number of years they have been in business.

AGE OF DRUGSTORE FAILURES IN 1951

Starting Year	Percent
1951	2.8
1950	18.1
1949	18.1
1948	10.5
1947	7.6
1946	13.3
1945	4.8
1944	1.9
1943	1.0
1942	1.0
1941	4.8
1940	5.7
1935–39	5.7
1930–34	2.8
1925–29	1.9

In analyzing the reasons for retail drugstore failures, Dun & Bradstreet has found that the following are the most common causes in order of their importance:

Inadequate Sales	46.3%
Excessive Fixed Assets	14.8%
Competitive Weaknesses	14.8%
Inventory Difficulties	13.9%
Poor Health	7.5%
Poor Location	7.5%
Heavy Operating Expenses	5.6%
Receivables Difficulties	1.8%

By and large, the public believes the charges on prescriptions are fair. A recent survey among a cross-section of 500 residents of North Carolina (*J. A. M. A.*, July 18, 1953, pp. 1145–1149) revealed that 61 per cent felt the prescription charges were fair while 39 per cent thought they were not. This compares quite unfavorably with the physician. Here, 72 per cent thought the doctors' fees were fair and only 28 per cent did not. It is certainly obvious that almost four out of every ten persons who believe they are being overcharged on prescriptions should be educated to understand otherwise. It is the job of every responsible pharmacist to explain to a customer *beforehand* that his prescription will be more than the average. In this way, much misunderstanding and ill will can be avoided.

Your Physician

Today, there are an estimated 170,000 practicing physicians in the United States. This is quite an increase over the 145,000 of 1939.

According to the latest Medical Economics survey of income, general practitioners net themselves $14,098 annually, specialists $17,112, and partial specialists $15,119. The average net income for all physicians is $15,262, which, compared with $4,470 for the year 1939 is proof enough that the public is much more interested in protecting its health than ever before.

Now, of course, it is important to know what these busy, prosperous physicians are prescribing. As we suggested earlier, inventory control is a very important part of successful store management, and since 20.1 per cent of total store sales are prescriptions, it is most vital that prescription trends be known.

Probably the most comprehensive continuing study of prescription trends is that conducted by the Research Society Inc., of Boston, Mass. A recent summary of their findings (based on a study of 231,860 prescriptions) showed the following prescriptions by therapeutic classification:

25.88% of the prescriptions called for an anti-infective.
10.46% called for analgesics and antiarthritics.
9.66% were for vitamins—hematinics and related products.
9.39% for sedatives and hypnotics.
6.38% antihistaminics.
5.87% for antacids, antispasmodics, and peptic-ulcer therapy.
5.31% cough preparations and nasal decongestants.

The average price for these 231,860 prescriptions was $2.17. Compared with a similar study conducted during 1951, we find antiarthritics on the increase along with products used to lose weight. It is also significant that vitamin-hematinic and related preparations are also showing steady progress.

By working closely with your doctors and studying your prescription-product movement, as well as the many excellent prescription surveys and articles available in your drug journals, it is not too difficult to keep your prescription department inventory adequate and your profit where it should be.

It is well to remember that the average sale for all items in a drugstore is only 49 cents, whereas the average prescription runs between $1.98 and $2.17. This is business worth going after because it is both professional and profitable.

Your Manufacturer

The better-known pharmaceutical houses have an estimated 15,000 detail men calling on physicians every working day in the year. These representatives are a well-trained and well-educated group of men. Many of them are pharmacists themselves, with limited-to-extensive experience behind the counter. They are pollenizers of information; picking up good ideas here and spreading them helpfully throughout the country. Much can be gained if the store owner will work hand in glove with these representatives. We did not find one out of the five hundred-odd busy pharmacies we studied that did not associate themselves very closely with the pharmaceutical representatives covering the territories in which these stores were located.

The question of whether a reputable pharmaceutical company remains in business is how successful the company's representatives are in creating specifications for their specialty products. The successful prescription pharmacy watches the sales performance of each of the representatives calling on him, and the more

(Continued on page 722)

the pharmacist's role in . . . DIABETES DETECTION

Your pharmacist works for better community health. During Diabetes Week, November 15 to 21, he urges you to visit your local testing center for a quick easy test. Your pharmacist knows that diabetes can usually be controlled if detected early. Don't delay. Test for diabetes today.

A.PH.A. Public Relations Committee mailed text at upper left to 290 television stations to be used with television slide shown above.

THE PHARMACIST has always played an outstanding role in the field of public health information, whether by teaching, practicing, or doing research. Thus, cooperation of the pharmaceutical profession in programs of public health education is one way in which its special qualifications may be presented to other professions and to the public.

One such program is the annual Diabetes Detection Drive, sponsored by the American Diabetes Association, and renewed for its sixth year during Diabetes Week, November 15–21. Its purpose is to discover the approximately 1,000,000 hidden diabetics through an organized screening program conducted by state and county medical societies, and by the 34 local diabetes associations affiliated with the American Diabetes Association.

Discovering Diabetes

During Diabetes Week the problem of undiscovered diabetes is brought to the public attention through extensive radio, newspaper, and magazine publicity, posters, leaflets for mass distribution, and the participation of individual physicians, pharmacists, and laymen in civic, industrial, union, educational, and community organizations in over 800 areas of the United States, Canada, Puerto Rico, and Hawaii.

Almost every pharmacist in the United States is familiar with the scope of this program since it has been endorsed by the House of Delegates of the AMERICAN PHARMACEUTICAL ASSOCIATION and its previous activities have been reported in THE JOURNAL during the past few years. In addition endorsement and active support of the Diabetes Detection Drive have been given by state and local pharmaceutical associations.

Pharmacists in every phase of activity can participate in the Diabetes Detection program, but especially those in practice may support the campaign by displaying equipment for diabetics, literature, and testing material. Educational literature is available from local diabetes associations or through county medical societies that are participating in the Drive.

Creative Displays

Various types of insulin and other products used in the treatment of diabetes offer themselves for display as well as syringes, testing products such as Benedict's Solution, etc. An interesting display which has proved effective is the use of pharmacist's scales with lumps of sugar on one balance to show dramatically how much sugar the uncontrolled diabetic excretes in a day. Attractive three-color posters are available for window and counter displays as well as the American Diabetes Association's pamphlet "Diabetes—Its Detection, Its Control." The practicing

DIABETES WEEK, NOVEMBER 15-21

pharmacist may cooperate just as valuably by volunteering his store as a distributing agency for specimen bottles if they are needed by the local medical authorities. Or the pharmacy may be a collecting center for such urine samples to be delivered to the diabetes testing center at various times during the Drive. Of course, all these activities should be coordinated with the local Committee on Diabetes.

Pharmacists are in an ideal position to volunteer information on how individuals should take urine samples and how much urine is needed; how long after meals the urine should be obtained, what kind of a meal should be eaten, and so on.

Individual pharmacists who maintain radio time on local stations should contact the local Committee on Diabetes to arrange for tying in their announcements with the Diabetes Detection Drive before and during Diabetes Week. Those who have done so have found it brings its dividends in heightened interest and timeliness to their broadcasts.

The practicing pharmacist who is in constant touch with the public finds dozens of occasions to inform people of the dangers of undetected diabetes and the convenient way individuals can find out whether they are free of this ailment or not. He can point out how this hitherto almost always-fatal disease has been brought under control since 1922, and can now be successfully managed through a dietary regimen, insulin therapy and planned exercise—provided it is discovered in time.

By cooperating with the local diabetes association, or the state or county medical society, the pharmacist will gain the good will of community leaders and diabetics and their families.

Briefly, here is how the local pharmaceutical association or the individual pharmacist can bring the urgency of being tested for diabetes to the attention of his clientele.

1. In many communities, the Diabetes Detection Drive has been taken up as one of the major responsibilities of the local pharmaceutical association. When volunteering their services as a group to the local medical societies, the pharmaceutical associations are given major assistance in the organizational work of the community-wide screening campaign. This splendid contribution on the part of the profession is appreciated not only by the public but by the other professional groups. Such a practical method of cooperation is possible in every locality where the local medical society has organized a program for Diabetes Week and the year-round detection program.

2. Display the Diabetes Week poster and the "Diabetes—Its Detection, Its Control" leaflet in his window and on his counter. These may be obtained from the local committee on diabetes of state or county medical societies or from local affiliates of the American Diabetes Association.

3. Learn the address of the local testing center to which the public may be directed for blood or urine screenings.

4. The pharmacy can become a distributing or delivery center for specimen bottles which may then be turned over to local testing centers.

5. Display medicine, supplies, syringes used in insulin therapy, as well as any display material on diabetes testing kits or types of insulin available from the manufacturers. In this way, the local pharmacy can serve as an information center on diabetes, diabetes detection and diabetes control, emphasizing the professional facilities which he has available.

6. Discuss with the local Committee on Diabetes the possibility of tying in radio time sponsored by local pharmaceutical groups or individual pharmacists. The same may be done in local newspaper publicity and advertising.

7. In each community pharmacists can play definite organized roles in the work of the medical society. If they can make available their pharmacies as collection stations or their delivery facilities for carrying urine samples to a central testing center, they may render a great service. In any event, as a depot for distributing information they can instruct individuals how to take urine samples and where they can have them tested during the campaign.

8. But whether a Diabetes Week program has been planned in your community or not, the individual pharmacist can become a one-man diabetes detection campaigner himself. By taking advantage of the nation-wide publicity, he can urge every one of his clients to participate in this screening program by visiting his personal physician for a checkup.

Voluntary cooperation on the part of the individual is a basic ingredient of our American heritage. The Diabetes Detection Drive is a typical example of such voluntary organization and participation by individual physicians, pharmacists, and lay community leaders in furthering the cause of medical education on the public level. As such it deserves the enthusiastic support of every American pharmacist.

provides pharmacy with an outstanding public health program

FROM THE SECRETARY'S DIARY FOR OCTOBER, 1953

1st Today an interesting discussion with Paul Blanc, secretary of the group of international pharmacopeial experts, who have been devising generic names for drugs on an international basis, and U.S.P. Revision Director, Lloyd Miller. It is interesting to note the gradual unfolding of the influence of the World Health Organization on the future of pharmacy.

3rd Yesterday discussing possible integration of objectives of "National Employ-the-Handicapped Week" with "National Pharmacy Week," both scheduled from October 4 to 10. This morning a quick review of progress on the archives project here at Headquarters on which George Griffenhagen and Alex Berman are giving a helping hand.

5th Now completing the biographical sketches for candidates for A.PH.A. offices which will be mailed with the ballots. With President Franzoni and other guests at the head table of the D.C. Medical Society luncheon at the Statler where Dr. Ulrich Bryner, president of the American Academy of General Practice, was the principal speaker and later a visitor to A.PH.A. Headquarters. It was a pleasure to welcome Dr. Bryner who hails from Salt Lake City and who addressed our Convention there last August.

7th Today welcoming Mr. and Mrs. T. W. Hoskins, of Louisville, Ky., who are on a vacation trip and stopped to see what goes on at Headquarters. Mr. Hoskins has been very helpful in the development of the Student Branch and other A.PH.A. projects in Louisville, Ky. Now off to Trenton, N.J., on this A.PH.A. Founders' Day to meet with the trustees of the N.J.Ph.A. and members of the Board of Pharmacy to discuss effects of recent New Jersey legislation and court decisions on the immediate and distant future of the dispensing of drugs. Meeting Treasurer Schaefer on the return trip to Washington.

9th Much of today and yesterday spent at the annual meeting of the American Council on Education at the Statler. Listening to President Eisenhower's greeting to the Council and addresses by distinguished educators on current problems and, after lunch with George Webster and Hugo Schaefer, joining various smaller groups for discussion of modern trends in education. In the evening listening to the inspiring address of President Arthur Adams at the annual dinner.

13th Off to New York early this morning for an afternoon meeting of the Board of Directors of the National Health Council which has taken on a new lease on life with a new director and a decreased budget. Glad to welcome Dr. E. C. Elliott during the past week-end and enjoyed his stimulating discussion of the aftermath of the Pharmaceutical Survey.

15th Yesterday a conference with Dr. H. A. B. Dunning at Baltimore on business of the A.PH.A. Foundation and other programs. Today discussing A.PH.A. affairs at length with President Franzoni and welcoming Mr. Carl Baer, who has come to join our staff as acting librarian.

21st Yesterday and today giving considerable time and attention to the "Crusade for Freedom," including briefing at the Pentagon, a visit to the White House, and later listening to an intimate discussion on "Radio Free Europe" over which Henry Ford II presided. Yesterday attending the cornerstone laying of the building for the Armed Forces Institute of Pathology at the Army Medical Center on the grounds of the Walter Reed Hospital.

22nd Reviewing committee appointments and current business with President Franzoni and discussing long-term research programs with Dr. Veldee, now a consultant of the Stanford Research Institute and formerly with the Public Health Service. A chat with Dr. Bachman of the Brookings Institution on health insurance plans in company of Alex Berman.

23rd A visit to the splendid pharmacy installation at the National Clinical Center at Bethesda over which pharmacist M. W. Skolaut presides with splendid efficiency. Truly the last word in fine equipment.

25th A flying visit from Dr. Robert Cadmus of the North Carolina University Hospital who represents the A.H.A. on the Policy Committee of our Division of Hospital Pharmacy.

31st The past few days sticking close to the desk in an endeavor to unpile the accumulation which collects whenever special projects require priority, and visits to distant points take up the time. Now off to Newark, N.J., to address the New Jersey Hospital Pharmacists Society at their annual dinner and meeting many former colleagues and friends.

He may or may not be a tycoon, but he and dozens like him can bring you $15.00 a year *each* in Peritrate profits. His physician writes for Peritrate because he knows it reduces both the number and severity of anginal attacks.

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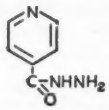
PRODUCTS RECENTLY ACCEPTED BY THE A. M. A. COUNCIL ON PHARMACY AND CHEMISTRY

ISONIAZID.—Nydrazid (Squibb).—Pyrizidin (Nepera).—Tyvid (Merrell).—$C_6H_7N_3O$.—M. W. 137.14.—Isonicotinic acid hydrazide.—The structural formula of isoniazid may be represented as follows:



Actions and Uses.—Isoniazid is an antibacterial agent highly active *in vitro* against human, bovine, and Calmette-Guérin bacillus strains of Mycobacterium tuberculosis. Isoniazid is effective only against mycobacteria, except for some slight activity against Trichophyton mentagrophytes and certain other species of fungus. Clinically the drug may be used in tuberculosis for simultaneous administration with other tuberculostatic agents in patients for whom chemotherapy is indicated by present criteria. The drug may be employed alone in tuberculous patients who are already hypersensitive to streptomycin or whose tubercle bacilli are resistant to the latter drug. Otherwise, combined therapy is preferable to the administration of isoniazid alone in order to avoid if possible the development of resistance to either agent, as this would decrease the chance of early response to chemotherapy, surgical treatment, or both. Although the exact place of isoniazid in the chemotherapy of tuberculosis is still to be determined, so far it is considered to be of value in the pulmonary and renal forms of the disease, as well as in miliary tuberculosis, tuberculous meningitis, and discharging "cold abscesses."

Isoniazid is almost completely absorbed from the digestive tract. In persons with normal renal function, one-half to three-fourths of the amount ingested is recovered from the urine in 24 hours, and not more than 5 to 10 per cent of the drug appears in the feces. The peak concentration in the blood occurs one to three hours after oral administration, and the minimal detectable concentration of 0.4 mcg. per cubic centimeter persists for 6 to 24 hours, following a single dose of 3 mg. per kilogram of body weight. This level is above the concentration necessary for *in vitro* tuberculostatic effects. The concentration in the saliva is comparable to that in the blood. The drug passes readily through the meningeal barrier and is well distributed in all of the various body fluids. There is no evidence that the drug accumulates in the tissues or that tolerance develops when administration of the recommended dosage is continued.

Intramuscular injection produces plasma concentrations approximately equal to those obtained with the same dosage administered orally. Following injection, the drug is somewhat more rapidly excreted in the urine. Transient, local pain at the site of injection may be encountered. Intramuscular injection of the drug is therapeutically equivalent to oral administration and should be employed whenever the latter route is not feasible, as in coma caused by tuberculous meningitis or during the early postoperative period following pulmonary resection. An injectable solution may also be employed topically for tuberculous empyema or effusion.

Experimental animal studies indicate a wide margin of safety between the effective and toxic dose of isoniazid. Toxic doses in animals produce reversible symptoms, which include anorexia, weight loss (from loss of appetite), liver damage, and signs of central nervous system stimulation manifested by tremor, ataxia, rapid respiration, bradycardia, and, in some instances, convulsions. In laboratory animals, phenobarbital diminishes the convulsive action of isoniazid. Forced feeding has mitigated the hepatic damage produced by isoniazid in these animals. Toxic doses also produce some kidney damage in animals. Since isoniazid is excreted chiefly by the kidney, it should be given with caution and in the lowest recommended effective dose when renal damage is expected or known to exist. Renal tuberculosis should not be treated unless adequate facilities are available for estimating blood levels of isoniazid.

The toxic effects observed in human beings include vertigo, constipation, twitching of the lower extremities, drowsiness, headache, hyperreflexia, dryness of the mouth, and delay of the urinary stream. Toxicity has not been noted in patients receiving total daily doses of 5 mg. per kilogram of body weight who did not have existing convulsive disorders. Epilepsy or convulsions (in cases of meningitis) should be adequately controlled by appropriate anticonvulsant medication before and during isoniazid therapy.

Dosage.—Isoniazid is administered orally or intramuscularly in the recommended daily dosage of 3 to 5 mg. per kilogram of body weight, divided into equal doses every 12 hours. This dosage should be exceeded only with caution and when adequate facilities are available to detect toxic symptoms. In patients seriously ill, such as those suffering from tuberculous meningitis or miliary tuberculosis, it is advisable to use a daily dosage of 7 mg. per kilogram of weight for a period of 7 to 10 days, then to reduce this to the usual maximum total daily dosage. The dosage should be reduced when signs of a toxic central nervous system stimulation develop.

Isoniazid may be used concurrently with streptomycin or dihydrostreptomycin. Either of those drugs should be administered intermittently twice weekly or every three days in doses of 1 Gm. for adults or 20 mg. per kilogram of body weight for children, given intramuscularly. Concomitant use of isoniazid with daily 1-Gm. doses of a streptomycin drug should be restricted to acute forms of tuberculosis and limited to a period of one to two weeks until there is more information concerning the side-effects that may result from this method of therapy.

(Continued on page 718)

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250 mg.—bottles of 16 and 100
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Delicious, raspberry flavored—easy to take. 1.5 Gm. of Terramycin in 1 oz. bottle (250 mg. per 5 cc. teaspoonful). Nonalcoholic. Shelf packages of 10

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*TRADEMARK

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For intramuscular injection, a solution containing 100 mg. per cubic centimeter should be administered so as to provide the same dosage as that indicated by the oral route. The same concentration can be applied topically in 10-cc. amounts three times weekly for the local treatment of tuberculous empyema or effusion.

Tests and Standards—

Physical Properties: Isoniazid is a white, odorless, crystalline powder, m.p. 170–173°. It is sparingly soluble in alcohol, very slightly soluble in benzene and ether, and freely soluble in water. The pH of a 1 per cent solution is 5.5–6.5.

[For more information regarding tests and standards see *J. A. M. A.*, **151**: 740(Feb. 28, 1953).]

Dosage Forms of Isoniazid—

The Bowman Bros. Drug Company, Canton, Ohio.
Tablets Isoniazid: 50 mg.

The Wm. S. Merrell Company, Cincinnati.
Tablets Tyvid: 50 mg.

Nepera Chemical Company, Inc., Yonkers, N.Y.
Tablets Pyrizidin: 50 mg. U.S. trademark 420,725.

E. R. Squibb & Sons, Division of Mathieson Chemical corporation, New York
Capsules Nydrazid: 50 mg. and 100 mg.

Solution Nydrazid (Intramuscular): 10-cc. vials. A solution containing 100 mg. of isoniazid in each cubic centimeter. Preserved with 0.5 per cent chlorobutanol.

Syrup Nydrazid: 473-cc. bottles. A flavored syrup containing 10 mg. of isoniazid in each cubic centimeter. Preserved with 0.1 per cent sodium benzoate.

Tablets Nydrazid: 50 mg. and 100 mg.

ALKAVERVIR.—Veriloid (Riker).—Alkavervir is a mixture of alkaloids obtained by the selective extraction of Veratrum viride N.F. with various organic solvents and selective precipitation from acidic and basic solutions.

Actions and Uses.—Alkavervir is a reproducible extract of Veratrum viride assayed for the total hypotensive effect of its component alkaloids. When administered intravenously, it produces prompt lowering of the blood pressure and concomitant slowing of the heart rate in both normotensive and hypertensive animals and man. The mechanism of action is believed to be a dilatation of arterioles accompanied by constriction of the venous vascular beds. Its action on smooth muscle of the gastrointestinal tract is spasmogenic. Its hypotensive effect reduces both systolic and diastolic tension and is not dependent upon cardiac slowing. Bradycardia is readily overcome by atropine. Hypotension can be counteracted by pressor amines such as ephedrine and phenylephrine. The extract produces variable effects on the blood flow, but has not increased the number or severity of attacks in patients with angina. The chief side-effects in order of appearance are substernal or epigastric burning, salivation, nausea, and vomiting. These frequently can be avoided by employment of slow intravenous infusion. Extreme overdosage leads to hypotension, bradycardia, and collapse; large doses also produce respiratory depression with bronchiolar constriction and apnea. Cardiac arrhythmias may occur rarely and can be controlled by atropine. No drug has been found which will overcome the side-effect of nausea. The extract is readily absorbed by the gastrointestinal and usual parenteral routes. Its action by the oral route is often unpredictable and characterized by frequent side-effects which interfere with effective dosage. Injection into the tissues is painful and should be avoided. The extract apparently undergoes slow destruction by mobilization from its receptors, presumably in the brain. Tachyphylaxis and tolerance to its hypotensive action have not been observed clinically.

Alkavervir is recognized for use only by parenteral injection in the treatment of hypertensive crises for selected cases of eclampsia, pre-eclampsia, toxemia of pregnancy, acute glomerulonephritis, and hypertensive encephalopathy. It should be employed with care in chronic uremia because such patients may have difficulty in adjusting to lowered blood pressure levels. It should be used with caution in patients receiving quinidine therapy. It is contraindicated in hypotension, coarctation of the aorta, pheochromocytoma (less effective than other measures), digitalis intoxication, and high intracranial pressure not secondary to hypertension. Anesthetic agents do not interfere with hypotensive action of the extract, but their effect on blood pressure must be considered in determining the dose of alkavervir when it is used in conjunction with anesthesia. Drugs of the morphine series have additive but not synergistic action with the bradycardic action of alkavervir. It also summates the heightened cardiac irritability produced by digitalis. It is considered unwise to employ diuretics during hypotensive therapy.

Dosage.—Alkavervir is administered by either intravenous or intramuscular injection. Intravenous injection provides a more prompt hypotensive effect, whereas by intramuscular injection, the action is delayed and more prolonged.

Alkavervir is administered intravenously as a solution containing 0.4 mg. of the dried extract per cubic centimeter. The dosage for the initial injection is estimated on the basis of 0.15 cc. of such solution for each 10 lb. (4.53 Kg.) of usual or estimated body weight, whichever may be lower. This amount is then diluted to 10 cc. with sterile isotonic sodium chloride solution or 5 per cent dextrose solution. The speed of injection should be at the rate of 0.5 cc. of the diluted solution per minute for a total of 4 cc. (8 minutes), and a check of the blood pressure should be made at least once every minute. After a wait of 2 minutes, the injection is continued at the same rate, again checking blood pressure until an additional 3 cc. (6 minutes) are given. Following another interval of 2 minutes, the injection is resumed at the same rate and the blood pressure is observed closely until the remaining 3 cc. of diluted solution is injected.

The administration should be interrupted whenever either the systolic or diastolic blood pressure falls as much as 20 mm. of mercury and it should be discontinued if either gross irregularity of the pulse or emesis occurs, particularly if neither symptom was present before the injection was started.

An interval of 2 minutes should be allowed following the initial injection to permit stabilization of blood pressure and to determine if additional injection is needed. A blood pressure range of 150/100 is generally recommended. Usually, desired lowering of blood pressure is obtained after administration of 5 to 10 cc. If a fall in tension does not result from the first 10 cc. of diluted solution, after 5 minutes, the syringe is refilled with the same dilution and the same procedure is followed for the first 20 minutes. Some patients may require a total of 15 cc. or more diluted solution before the desired level of blood pressure is obtained. The effect of the amount required to reduce pressure to the desired level usually persists for 30 to 45 minutes and requires an interval of $1^1/_2$ to 3 hours to return to the hypertensive level.

In encephalopathic patients, after the blood pressure has been reduced by the initial injection, two methods of maintaining pressure at the desired level may be followed according to the judgment of the clinician. It is important that a period of rapid infusion should not occur during the time when the rates of flow are being adjusted. Maintenance therapy can be provided by almost continuous slow intravenous infusion to keep the tension at the desired level for as long as this is feasible, usually several days, or by repeated slow injections like those used initially. The blood pressure is allowed to return to the prior preinjection level between each injection until reflex adjustment occurs. As many as six such injections have been employed in a single case. For the first method of maintenance, the dosage is based upon 0.6 cc. of undiluted solution per 10 lb. (4.5 Kg.) of body weight. This solution is added to a liter of 5 per cent dextrose solution for injection and administered at the rate of 30 drops per minute. The usual effective dose by this method does not exceed 100 cc. of the diluted solution per hour. The infusion should be maintained at a rate which will hold blood pressure to the desired level without inducing emesis.

During infusion the patient should be under constant observation and the blood pressure checked at least every 10 to 15 minutes. A solution of ephedrine sulfate 2.5 per cent (25 mg.) to combat an excessive fall in blood pressure and of atropine sulfate 1:1,000 (1-cc. ampul) to overcome bradycardia should be available at the bedside for intramuscular injection whenever this may become necessary during the administration of alkavervir.

Alkavervir is administered intramuscularly as a solution containing 1 mg. of the dried extract per cubic centimeter. When this route is used to prolong the hypotensive action following intravenous therapy, the intramuscular dose can be translated from the body weight of the patient and the previous dose in cubic centimeters of the diluted intravenous solution of 0.4 mg. per cubic centimeter. Thus if the previous diluted intravenous dose was 5 or 6 cc., a patient weighing 140 to 165 lb. (63.5 to 74.8 Kg.) would require a dose of 0.5 cc. of the intramuscular concentration. A table for conversion of the diluted intravenous to the undiluted intramuscular dosage is available. When the intramuscular route is used for initiating therapy, the dose should be estimated on the basis of 0.25 cc. per 50 lb. (22.5 Kg.) of body weight of the solution containing 1 mg. per cubic centimeter, except that the initial dose should not exceed 1 cc. The blood pressure should be determined during the first hour at not less than 15 minute intervals. A tourniquet may be useful to slow absorption if there are early signs of overdosage.

The intramuscular dose produces its maximum effect in about 60 to 90 minutes. Subsequent intramuscular doses should be administered when the blood pressure has returned to about three-fourths of the original pretreatment level. When the first dose is too small to lower the pressure, a further injection should not be administered until a lapse of two to three hours following the initial dose. The size of the second and subsequent intramuscular doses should be governed by the response of the patient to the previous injection. For adults the dose should be adjusted by 0.25-cc. increments or decrements, using proportionately smaller deviations in children.

Tests and Standards—

Physical Properties: Alkavervir is a light yellow powder with a strongly sternutatory action. It is freely soluble in alcohol and acetone, but is practically insoluble in water.

Assay: Alkavervir is assayed biologically by determining the degree of blood pressure lowering upon slow intravenous injection in dogs.

[For more information regarding tests and standards see *J. A. M. A.*, **151**: 820(Mar. 7, 1953).]

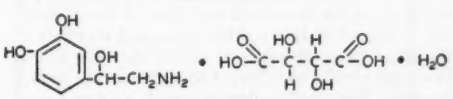
Dosage Forms of Alkavervir—

Riker Laboratories, Inc., Los Angeles.

Solution Veriloid (Intravenous): 5-cc. ampuls. A 0.25 per cent acetic acid solution containing 0.4 mg. of alkavervir in each cubic centimeter.

Solution Veriloid with Procaine Hydrochloride 1% (Intramuscular): 2-cc. ampuls. A 0.25 per cent acetic acid solution containing 1 mg. of alkavervir in each cubic centimeter. Preserved with 0.5 per cent chlorobutanol and 0.1 per cent sodium bisulfite.

LEVARTERENOL BITARTRATE.—Levophed Bitartrate (Winthrop-Stearns).—$C_8H_{11}NO_3 . C_4H_6O_6 . H_2O$.—M. W. 337.28.—*l*-α-(Aminomethyl)-3,4-dihydroxybenzyl alcohol *d*-bitartrate monohydrate.—The structural formula of levarterenol bitartrate may be represented as follows:



Actions and Uses.—Levarterenol bitartrate, a water-soluble salt of the levo isomer of the primary pressor amine, arterenol, differs chemically from epinephrine by the absence of a methyl group on the nitrogen atom. Its action differs clinically from that of epinephrine chiefly by its over-all vasoconstrictor influence, its marked slowing of the pulse rate of horizontal subjects, and the absence of a stimulant effect on cardiac output. Levarterenol bitartrate produces a rise in blood pressure because it functions as a sympathetic mediator of peripheral vasoconstriction, whereas epinephrine acts as an over-all vasodilator and induces hypertension only by increasing cardiac output. In this respect, levarterenol is similar to synthetic pressor amines, such as phenylephrine, which are preferred to epinephrine in the treatment of hypotensive states caused by cen-

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tral vasomotor failure and peripheral circulatory collapse. Levarterenol bitartrate produces about two and one-half times the degree of vasodilatation on the coronary arteries that is produced by epinephrine. It may be administered to diabetic patients because its hyperglycemic effect is slight.

Levarterenol bitartrate is useful for the maintenance of blood pressure in acute hypotensive states caused by surgical and nonsurgical trauma, central vasomotor depression, and hemorrhage. It should not be employed for ordinary shock in place of appropriate intravascular fluids, such as plasma, when the fall in blood pressure is primarily the result of decreased blood volume rather than impaired vasomotor activity.

Levarterenol bitartrate is reported to have a safety ratio (pressor activity to toxicity) that is four times greater than that of epinephrine. Because of this and its lesser effect on the heart, levarterenol bitartrate is considered to be better tolerated and relatively safer than epinephrine. Infusion of levarterenol bitartrate may produce a bradycardia, apparently of vagal origin, which is abolished by atropine. A few cases of transient headache and hypersensitivity have been observed following its use. Levarterenol bitartrate is contraindicated when cyclopropane anesthesia is employed because of the possibility of increasing the risk of ventricular fibrillation.

Dosage.—Levarterenol bitartrate is administered by intravenous infusion in either isotonic sodium chloride solution, 5 per cent dextrose solution, human plasma, or whole blood. An amount sufficient to make a final dilution of 4 mcg. (base) per cubic centimeter is usually prepared by adding 4 cc. of a 0.2 per cent solution of levarterenol bitartrate (equivalent to 0.1 per cent of the base) to each 1,000 cc. of the fluid to be administered. This concentration should be given through a previously calibrated Murphy drip bulb which will permit an accurate estimation of the rate of flow in drops per minute. An initial dose of 1 to 2 mcg. of the base (0.25 to 0.5 cc. of the dilution) per 10 Kg. of body weight is given and its effect on the blood pressure carefully observed. The rate of flow then should be adjusted to maintain the desired tension. The average dose ranges from 2 to 4 mcg. of the base (0.5 to 1 cc. of the dilution) per minute.

The blood pressure should be checked every two minutes from the time the drug is started until the desired level is obtained and every five minutes thereafter to avoid overdosage and dangerous hypertension. The rate of infusion must be watched constantly and the patient should never be left unattended while receiving the drug.

Tests and Standards—

Physical Properties: Levarterenol bitartrate is a white, crystalline, odorless powder. It melts between 100 and 106°. It is freely soluble in water, slightly soluble in alcohol, and insoluble in ether. The pH of a 0.1 per cent solution is between 3.0 and 4.0.

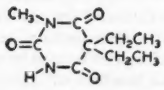
[For more information regarding tests and standards see *J. A. M. A.*, **151**: 821(Mar 7, 1953).]

Dosage Forms af Levarterenol Bitartrate—

Winthrop-Stearns Inc., New York.

Solution Levophed Bitartrate 0.2%: 4-cc. ampuls. An isotonic solution containing 2 mg. of levarterenol bitartrate in each cubic centimeter. Preserved with 0.2 per cent sodium bisulfite. U.S. trademark 434,232.

METHARBITAL.—Gemonil (Abbott).—$C_9H_{14}N_2O_3$.—M. W. 198.22.—5,5-Diethyl-1-methylbarbituric acid.—The structural formula of metharbital may be represented as follows:



Actions and Uses.—Metharbital, a derivative of barbituric acid, shares the anticonvulsant properties of phenobarbital. The drug, therefore, is useful in the treatment of various forms of epilepsy including grand mal, petit mal, and myoclonic and mixed types of seizures. It may be effective in patients whose seizures are not controlled with other anticonvulsants, particularly in the management of myoclonic seizures and in cases attributed to organic brain damage. Conversely, it may be inferior to other agents for the management of idiopathic forms of the disease. In experimental animals the drug is effective for the control of convulsions induced by pentylenetetrazole, but less so for those induced by electroshock.

Metharbital has a low toxicity and unfavorable side-effects are relatively infrequent. Drowsiness, increased irritability, rash, dizziness, or stomach distress may occur. In some patients the drug appears to be less hypnotic and depressing than phenobarbital.

Dosage.—Metharbital is administered orally. The initial dosage for infants and small children should be 50 mg. one to three times daily; for adults, 0.1 Gm. one to three times daily. The dosage may be gradually increased depending upon tolerance; some patients may require 0.6 to 0.8 Gm. daily to control seizures.

Tests and Standards—

Physical Properties: Metharbital is a white, crystalline powder with a faint aromatic odor, m.p. 151–155°. The amounts which dissolve in the following solvents to form 100 ml. of solution are: 4.3 Gm. in alcohol, 2.6 Gm. in ether, and 0.12 Gm. in water. The pH of a saturated solution is 5.6–5.7.

[For more information regarding tests and standards see *J. A. M. A.*, **151**: 1000(Mar. 21, 1953).]

Abbott Laboratories, North Chicago, Ill.

Tablets Gemonil: 0.1 Gm.

vi-syneral vitamin drops

first and **original**

aqueous solution of

fat-soluble plus

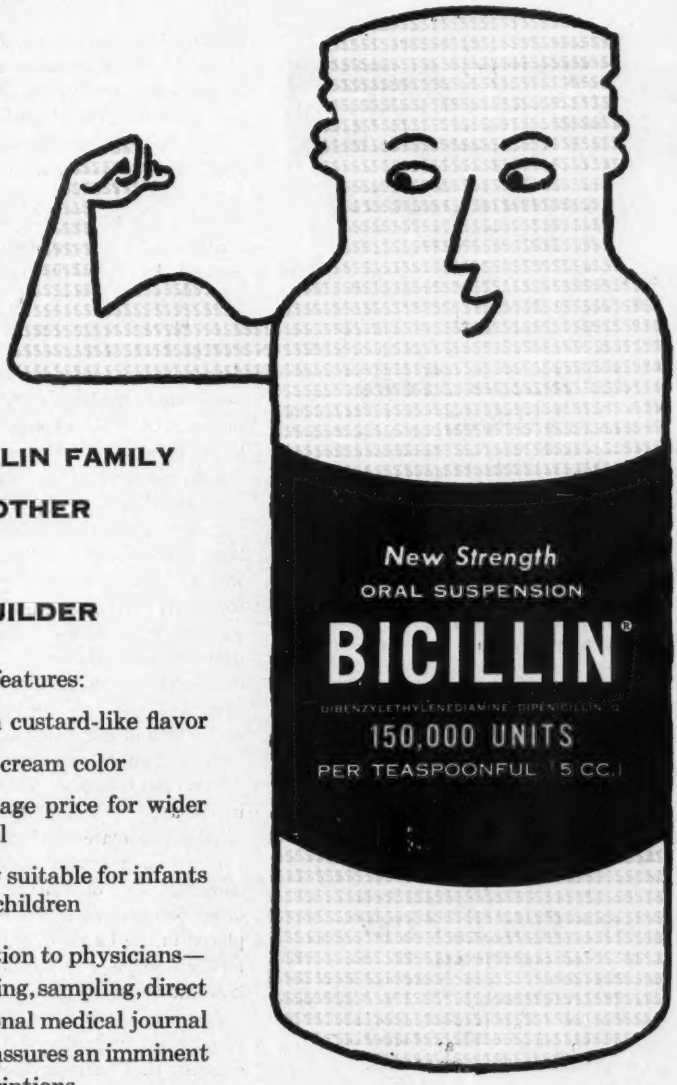
water-soluble vitamins.

(U. S. Patent No. 2,417,299.)

u. s. vitamin corporation

casimir funk laboratories, inc. (affiliate)

new york 17, n. y.



THE BICILLIN FAMILY ADDS ANOTHER MIGHTY PROFIT-BUILDER

Here are the features:

- New vanilla custard-like flavor
- Distinctive cream color
- Lower package price for wider purse-appeal
- Particularly suitable for infants and young children

Heavy promotion to physicians—through detailing, sampling, direct mail and national medical journal advertising—assures an imminent flood of prescriptions.

Better have ample stocks on hand!

Oral Suspension BICILLIN	YOUR COST	SELLING PRICE
Bottles of 2 fl. oz.	**$1.70**	**DISP.**

NOTE: Oral Suspension BICILLIN, 300,000 units per teaspoonful, continues to be available. Keep both potencies in stock so that you can dispense the correct strength as prescribed.

Wyeth®
Philadelphia 2, Pa.

FREQUENTLY PRESCRIBED

for Daytime Sedation

SEDAYSON

PATENT PENDING

Mild sedative tablet for on-the-job use. Quiets without incapacitating. Combination of acetylcarbroma and bromisovalum. Bottles of 100.

for Muscle Spasm

LATRODOL

PATENT PENDING

Synergistic tablet and liquid combination of mephenesin, nicotinic acid, and belladonna. 3-way relaxant for muscle spasm and tension. In bottles of 100 and pints of liquid.

for Hypertension

POTENSORS

with Phenobarbital and Rutin

Enteric coated tablet, yellow. General vasodilating agents with phenobarbital for sedation and rutin for protection against capillary fragility. In bottles of 100.

POTENSORS FORTE

Enteric coated tablet, orange. A full N.F. dosage of 1½ grains (100 mg.) chemically standardized veratrum viride. For resistant cases. In bottles of 100.

for Skin Diseases

SUPERTAH

White, creamy, non-staining ointment prepared from a concentrate of crude coal tar. Uniformly milled to equal 5% and 10% tar strengths. 2-oz. jars and tubes.

SUPERTAH-5

with Sulfur and Salicylic Acid

Same tar component of SUPERTAH-5, but in a non-greasy base especially for dermatitis in hairy areas. 1½-oz. jars.

TAILBY-NASON COMPANY

Kendall Sq. Station, Boston 42, Mass.

Prescription Trends

• • • • • • • • • • • • • *from page 711*

prescription response he gets from the efforts of particular detail men, the more likely he is to go all out with those men in keeping adequate stocks and promoting the physicians.

Another sales-producing tool which has been used by many manufacturers successfully is direct mail. In fact, there are several companies who have been able to build a very profitable business with a well-balanced sales force complemented by some hard-selling direct mail to physicians. Another way for the pharmacist to help determine his stocking requirements on a new product, or an older one being pushed on the detail cycle, is to find out from the representative how much mailing support is being given a preparation. Most companies let their salesmen know about their advertising efforts, but, if not, it is worth while to find out from the home office.

Clark-O'Neill, a medical mailing service, reported recently that a busy general practitioner last year received 3,305 separate mailings of which 2,883 were from pharmaceutical manufacturers. And, as might be expected, there was a distinct correlation between the number and frequency of mailings for particular therapeutic classifications and the prescription-trend data we presented earlier; i.e., anti-infectives, anti-arthritics and analgesics, and vitamins-hematinics were up front where we would expect them to be.

It is clear that many of the important advances in therapy come from the research laboratories of the pharmaceutical manufacturers. Highly paid research teams working with outstanding clinicians are developing new and important drugs every year. These products are then placed in the hands of highly trained marketing men whose job it is to show the representatives how and when the physician should use the drug.

Our study among over 500 busy prescription pharmacies and almost 1,000 busy physicians showed that new-product information is remembered as being received most often from the following sources: 41% from the detail man; 38% of the time from the pharmacist; 21% from direct mail, medical journal, and other sources.

It is readily apparent, then, that the pharmacist and the detail man constitute the major sources of information on new products. If the prescription department is to continue its phenomenal growth, the team of the pharmacist and detail man must learn to work closer. Together, these two men assist the medical profession in protecting the public's health and promoting a longer and more productive life for all.

Army Commissions Available

Applicants for commissions in the Medical Service Corps who are graduates of colleges of pharmacy and hold the Bachelor of Science Degree, and meet other necessary qualifications for commission frequently find that although they meet the requirements, there are no vacancies at the time of application. It is, of course, perfectly true that in times like these, when we are not on an emergency footing, vacancies occur infrequently. However, a sudden spurt in resignations or retirements of commissioned officers may cause vacancies without previous notice, and it is routine procedure for the Army to fill these vacancies with applications at hand.

Many pharmacists who have applied for commissions and have been informed that no vacancies exist at the time, take it for granted that their applications are kept in some kind of a chronological file to be referred to in the order of their application when vacancies occur. Our experience shows that this is not regular Army procedure. Actually, those applications which are in process at the time vacancies occur are much more apt to receive consideration than applications which have been filed earlier and denied because of lack of vacancies at the time.

It behooves every applicant for a commission in the Medical Service Corps to do his own follow-up work on the application. If the application is rejected for reasons other than lack of vacancies, little can be done, but if it is rejected because there are no vacancies, then the applicant should follow up his contact with the Army Headquarters Area through which he made application, or with the Office of the Adjutant General, at frequent intervals.

At this writing a number of vacancies have occurred for commissioned officers in the Medical Service Corps, and it is urged that any qualified applicant who has previously applied and who still desires to be commissioned, arrange to reactivate his application through the Army Headquarters Area or the Office of the Adjutant General at once. If the application was made a long time ago and nothing has been heard about it, it might be advisable to present a new application and urge its consideration.

It is a mistake for any applicant for a commission to assume that the Armed Forces are so interested in him in peace time as to follow up previous correspondence. The follow-up work must be done by the applicant.

Liberalized Army Resignation Policy

The Department of the Army has announced a more liberal policy concerning unqualified resignations from the service, for other than extreme compassionate reasons, applicable to officers and warrant officers serving on active duty.

Since the Officer Corps is on a volunteer basis at the present time, except in some specific instances, and in line with the Army's announced program to reduce the number of officers on active duty, unqualified resignations now will be accepted in cases where the individual has completed certain required periods of service and no conflicting circumstances exist in his case on the date of acceptance.

Previously, even after satisfying active service requirements, such resignations were accepted only in cases based on valid reasons such as hardship or national health, safety, or interest.

Applications for NROTC

Applications for the competitive NROTC College Training Program examinations must be received by November 21, 1953. The examinations will be conducted at test centers established throughout the country on December 12, 1953.

From those who attain qualifying scores, approximately 2000 students will be selected for entry into the program in the 1954 fall term of college. The Navy has NROTC units at 52 universities and colleges throughout the United States.

Applications may be obtained at high schools, colleges, offices of naval officer procurement, and navy recruiting stations throughout the country. Applications must be received by the Educational Testing Center Service, in Princeton, N. J., prior to November 21.

Federation Assembly

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By-Laws of the Association. These changes in the Constitution and By-Laws are incorporated in the Bulletin of the F.I.P., dated January 26, 1953. They are much too lengthy to report in detail in this communication, but in general have the purpose of further clarification of the objectives of the Association, the composition of its Council and General Assembly, and the officers of the Association. These changes in the Constitution and By-Laws were discussed in detail also at the sessions of the Council, and at the General Assembly sessions which followed, and were adopted by the Assembly with but minor changes of language.

The Council sessions reported above continued through Tuesday, September 15, and the General Assembly sessions of the F.I.P. were then called to order for meetings which continued through the balance of the week. These meetings were held in the auditorium of the Palais de Chaillot and were notable, as far as the American delegate was concerned, because here, for the first time, we were afforded the advantage of simultaneous translation of the papers and speeches by the availability of portable multi-language translating devices. We were thus able to follow the speakers much more readily, and to avoid the time-consuming necessity of waiting for each comment to be translated into several languages, with the obvious result of much of the original context being lost. This problem was one of great consequence in the meetings of the Council of the F.I.P., and necessitated lengthy sessions which could have been condensed greatly if simultaneous translations had been available. In the Council sessions, it was only through the good offices of the British delegation that we were able to follow closely the deliberations of the Council, since the British delegate, notably Sir H. G. Linstead, kindly volunteered to translate into English the comments of each of the speakers in the Council sessions.

In the General Assembly sessions, a wide number and variety of scientific papers were presented. The majority of these papers were on scientific subjects, and the Assembly was informed that all of these papers will be printed in the Bulletin of the F.I.P., and will be received at a later date by all members of the Federation.

Applications for the admission of new active members were received and approved from the following: Lebanon, Thailand, New Zealand, and Philippines. A report was made of associate members during the past year, and it is interesting to note that of 75 associate members, nearly 90 per cent were from the United States.

The American Delegation

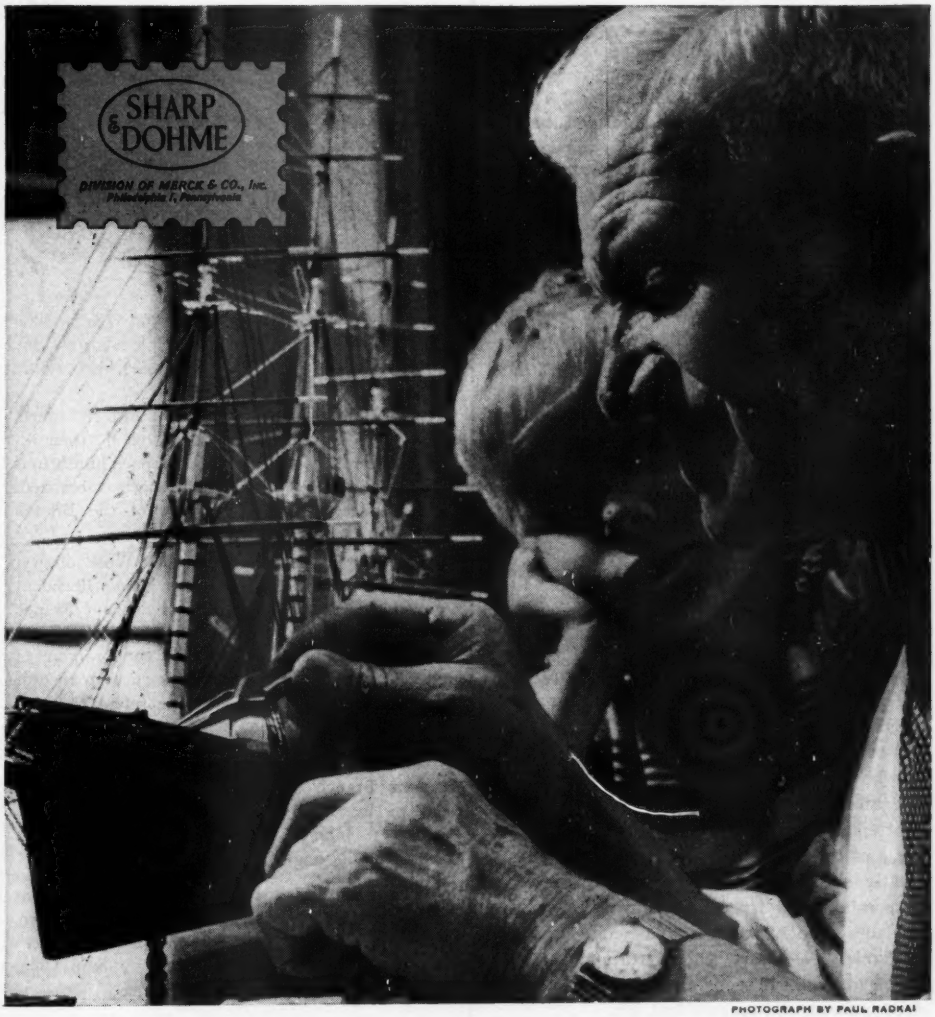
Our American delegation was extremely faithful in attendance at the various sessions of the General Assembly, and discounting the language difficulties, gave, I am sure, a good account of themselves and indicated to those present the definite interest of the A.PH.A. in the affairs of the F.I.P. Dr. Don Francke and Miss Gloria Niemeyer were very active in the preparation of the Constitution and By-Laws for the Section on Hospital Pharmacy, and Lt. Col. Roth and Col. Nelson were quite active in promoting the formation of the Section on Military Pharmacy. It can be hoped that future sessions of the F.I.P. will attract a greater number of delegates and members, since the formation of various sections, previously mentioned, will give each of these groups a more personal point of contact and interest than does any general assembly.

The Chairman of your delegation submitted the greetings of the A.PH.A. to the General Assembly of the F.I.P., and expressed our keen interest in the furtherance of the good work of the International Pharmaceutical Federation.

Next Assembly in London

The question of the next General Assembly of the International Pharmaceutical Federation was discussed, and it was decided to hold the next General Assembly in 1955, in London, England.

(Continued on page 726)



PHOTOGRAPH BY PAUL RADKAI

From 6 to 60... the preferred dosage form

REDISOL®

CRYSTALLINE VITAMIN B_{12}

ACTIONS AND USES: REDISOL offers the versatile vitamin B_{12} in all the practical dosage forms. The soluble tablets are a convenient oral dosage for therapy in certain cases of anemia (such as nutritional macrocytic anemia). Children like to take REDISOL Elixir, and it is particularly useful for compounding prescriptions. REDISOL Injectable provides more potent dosage strengths for use in selected anemias and for the relief of pain in certain neuritic conditions (such as trigeminal neuritis), and also in some vascular disorders.

SUPPLIED: In many forms—REDISOL Tablets, 25 and 50 mcg. in bottles of 36 and 100. REDISOL Injectable, 30 and 100 mcg. per cc. in 10 cc. vials—*and now* 1,000 mcg. per cc. in 1 cc. vials. Elixir, 5 mcg. per 5 cc. in pint SPASAVER® and gallon bottles.

This advertisement is appearing in current medical journals as part of Sharp & Dohme's promotion to the profession.

Federation Assembly

• • • • • • • • • • • *from page 724*

The Council of the F.I.P. was notified that the official delegate to the Council from the A.PH.A. was our permanent Secretary, Dr. Robert P. Fischelis.

Arrangements Well Handled

A word here regarding the arrangements made for this conference might be in order. The General Assembly sessions which were held, as noted, in the Palais de Chaillot, were held in a large and comfortable auditorium, with simultaneous translating devices available. The physical accommodations for the delegates were excellent, and in addition to good quarters for the actual meetings, many other comforts and conveniences were provided. Telegraph and postal facilities were available; an international exchange bank was set up for the exchange of various currencies; and extensive secretarial and information services were always available. One notable feature was that each delegate, when he registered, was given a packet containing full information on the program, entertainment features, maps of the city, tickets and guides to all social events, and every other notable bit of detailed information he would need. These packets, because all delegates had previously signified their intention of attending, were individually inscribed with the name of the delegate, and thus registration was greatly simplified. Separate registration desks were established for each nationality, with attendants who spoke that particular language available. Necessary transportation also was arranged, and, in general, the Committee on Arrangements did an excellent job.

Our American Responsibilities

In conclusion, as Chairman of the United States delegation to the International Pharmaceutical Federation, I wish to thank the members of our ASSOCIATION for the privilege accorded me in attending this conference, and my conviction that the presence of the American delegation has gone far to assure our overseas colleagues that we are deeply concerned with their problems, and that we wish to offer them every professional support within our power. I feel that our presence was profitable, and that this demonstration of continuity of interest will do much to insure an harmonious relationship with fellow pharmacists throughout the world.

STUDENT BRANCHES

These columns will carry Student Branch reports of meetings each month as submitted by their respective secretaries or reporters. Space limitations frequently require rewriting of reports submitted. Quoted material is the language of the Branch reporter.

As a part of National Pharmacy Week observance, the recorded messages from President Franzoni, Secretary Fischelis, and Student Branch Chairman Tice (referred to on page 666 of the October issue) became a part of the program of many of the Branches. The reference to records played at meetings in each case refers to these messages.

New officers of the **Alabama Polytechnic Institute Student Branch** are: Roger Everett, president; William Head, Jr., vice-president; Sidney M. Bird, secretary; John Mack Hudson, treasurer; Jack Boozer, public relations.

Edward Bernhauer is the newly elected president of the **Albany College of Pharmacy Student Branch.** Other officers are: Norman Gallagher, vice-president; Marilyn McCarthy, secretary; Sam Chiarello, treasurer.

Herbert Stelling was recently elected president of the **Montana State University Student Branch.** Other officers are: Donald Elliston, vice-president; Wayne Hanson, secretary; Donald Enebo, treasurer.

The first meeting of the **Butler University Student Branch** was held on October 2. Dean Karl L. Kaufman extended greetings to the students, and discussed some of the resolutions passed at the Salt Lake City Convention.

Election of the following officers was held on Founders' Day: William J. Fleming, president; Carolyn Anne McClurg, vice-president; Mary Sofios, secretary; Richard J. Sandler, treasurer.

At the October 5 meeting of the **Fordham University Student Branch,** the National Pharmacy Week record was played, and the many comments

concerning it were "favorable, flattering, and enthusiastic."

The following officers for 1953–54 were elected at the above meeting: James N. Robertson, president; William J. Schimmel, vice-president; Maurice T. Lebel, secretary; Leonard R. Piccoli, treasurer.

Recently the **George Washington University Student Branch** elected the following officers for 1953–54: Joseph Pistone, president; Carl Quaglia, vice-president; Frederick Cowan, secretary; Milton Lemons, treasurer.

Results of the elections of officers for the **University of Kentucky Student Branch** are: Russ H. Jones, president; Samuel V. Suppa, vice-president; Duncan Asher, secretary-treasurer.

The University of Minnesota Student Branch held its first meeting of the fall during National Pharmacy Week. The recording was played at that time and was "well received."

Officers of the Branch for 1953–54 include: Travis T. Olson, president; Duane C. Nelson, vice-president; Earl A. Schwerman, secretary; Leon M. Nikolai, treasurer.

An executive meeting of the **New England College of Pharmacy Student Branch** was held on October 1. President Goldstein appointed Frances Marchese, publicity secretary, and Leonard Robinson, chairman of the Program Committee. First Vice-President John Monahan was appointed chairman of the Executive Board.

The Branch held a meeting on October 8 at which the record containing messages from President Franzoni, Secretary Fischelis, and Dean Tice was played. The resolution to create a Student Section of the A.PH.A. was read, voted upon, and passed unanimously.

Officers for 1953–54 are: Leon Goldstein, president; John Monahan, 1st vice-president; Anthony Lamonica, 2nd vice-president; Everett Rand, 3rd vice-president; Claire Lariviere, secretary; Benjamin Barry, treasurer.

Jack G. Watts, former vice-president of the **University of South Carolina Student Branch,** has been elected president, and John B. Singleton has succeeded him as vice-president. Robert L. Sawyer and George S. Inman remain in their posts as secretary and treasurer, respectively.

Miss Joyce Nelson, member of the **University of North Carolina Student Branch,** made arrangements for a Pharmacy Week card trick between halves at the University of North Carolina in Chapel Hill during the football game with Washington and Lee on October 3.

At the first meeting of the **University of Colorado Student Branch** held on September 24, an outline of the coming year's activities was given. The evening was highlighted by the presentation of small cardboard mortars and pestles to be worn about the necks of all freshmen for a period of one week. These served the dual purpose of acquainting the freshmen with the upperclassmen and making the College of Pharmacy better known throughout the campus. This plan proved to be quite successful, especially since those who failed to wear the emblem were asked to appear before a Kangaroo Court the following week.

On Friday, October 2, the Branch sponsored a picnic in the mountains for all pharmacy students and their friends. Over 100 students turned out for campfire singing, good food, and to watch hula dances performed by Nancy Nakamura, a senior from Hawaii, who was accompanied by Jane Tarasawa, Stanley Kamemoto, and Louis Matsukado, all from Hawaii.

Officers for 1953–54 elected by the **St. Louis College of Pharmacy Student Branch** include: James Ellis, president; Joe Gianino, vice-president; Carmen Martinez, secretary; Ken Michel, treasurer.

During National Pharmacy Week, the **University of Arizona Student Branch** installed three windows in downtown Tucson establishments—a bank, a department store, and a jewelry store. The Branch also presented the radio drama "The Prescription that Shook the World" over the Columbia network.

Lorey James is the new secretary of the **Ohio State University Student Branch.** Two other new officers have been added to those listed in the April issue of THIS JOURNAL, page 250: Harry Shaver, editor of *Spur*, and Burl Sizemore, business manager.

During National Pharmacy Week, the **University of Michigan Student Branch** sponsored both a radio and television program. The radio program was an "interview-recorded music" type between WPAG Commentator, Bill Statit, and Richard D. Allen, president of the Branch, and was heard over two stations.

On October 7, President Allen demonstrated how to make a simple ointment over station WPAG-TV, after first explaining the importance of National Pharmacy Week and the A.PH.A. to the viewer. The TV program was "very well received."

The Branch's Founders' Day program featured the recorded message of Dean Tice on progress toward a Student Section. Professor Paul Norris spoke on "The Scope of Pharmacy Beginning Its Second Century."

The new president of **Xavier University Student Branch** is George E. Jones. Other officers for 1953–54 are: Charles Walker, vice-president; Tervalon Porche, secretary; Matthew Jacques, treasurer.

Newly installed officers of the **West Virginia University Student Branch** are: Jimmie Mangus,

(Continued on next page)

Branches

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president; William Shumate, vice-president; Margaret Kellison, secretary-treasurer.

The Texas Southern University Student Branch recently elected Mrs. Martha E. Alexander, secretary, and Elray Wise, treasurer, to replace Jean Kelly and Harold Stafford, respectively. (See June issue of THIS JOURNAL, page 395.)

The Idaho State College of Pharmacy Student Branch held its annual A.PH.A. Pharmacy Mixer on September 24. Students were greeted by Dean Roscoe and the Branch President, Leland Miller. Other organizations represented at the Mixer were Rho Chi, Phi Delta Chi Fraternity, and *The Refill*, the College's pharmacy quarterly.

The first meeting of the academic year of the **Loyola University Student Branch** was held on October 8 in conjunction with the first meeting of the New Orleans Branch of the A.PH.A. The principal speaker of the evening was Dr. Edward Ireland, Professor of Pharmacology at Loyola, who spoke on the history of the National Pharmacy Week celebration. He also announced publicly that Loyola Pharmacy College would initiate a five-year pharmacy program September, 1954.

In further observance of National Pharmacy Week, two professional displays were set up on the campus—one in the main library, dealing with common drugs obtained from coal and coal products; the other, in the pharmacy building which dealt with narcotics and narcotic problems.

Newly installed officers of the Loyola University Student Branch are: Robert Mayes, president; William Hite, vice-president; Fred Shiel, secretary; Ola Morgan, treasurer; John W. Mouton, recording secretary; Roger Phillips, historian.

An A.PH.A. "Rally" was held by the **University of Washington Student Branch** on October 7, during which the Founders' Day record was played. "Both the clear diction and the interesting and vital messages made the record very enjoyable listening."

The first **University of Utah Student Branch** meeting of the year was the annual Founders' Day dinner and program held on October 7. The record from National A.PH.A. Headquarters was "well received by the students and their guests." The resolution that a Student Section be formed within the framework of the A.PH.A. was read and unanimously approved. Dean Hiner gave the highlights of the Salt Lake City Convention, with Russ Engle adding the student's view of this event.

On October 8, the **Philadelphia College of Pharmacy and Science Student Branch** held its first meeting of the year. The record sent from national headquarters was played and received with "great enthusiasm" by the students. The members unanimously voted approval of the formation of a Student Section to function at future meetings of the A.PH.A.

Leonard Greenberg, vice-president of the Branch, gave a report on the material covered at the convention held in Salt Lake City last August.

A student mixer was held by the **University of Arkansas Student Branch** on October 7 to commemorate Founders' Day and National Pharmacy Week. The recorded messages of President F. Royce Franzoni, Secretary Robert P. Fischelis, and Dean L. F. Tice were played at this gathering and "enjoyed by all."

A window display was placed in one of the downtown pharmacies by the Branch. The theme "The Site of Action of Some Modern Drugs" was depicted by running streamers from sample drugs to their sites of action on a cut-away model of the human body.

Recently elected officers of the Branch for 1953–54 are: Gregory R. Blomstrand, president; J. D. Kahre, vice-president; Herbert H. Sullivan, secretary; John L. Murray, treasurer.

Copies of the new A.PH.A. constitution were distributed to the members of the **Columbia University Student Branch** at the meeting held on September 24. The constitution was discussed, and the members voted to adopt it.

William L. Weingold was placed in charge of the window display contest for National Pharmacy Week, and Robert Bebarfald, in charge of the bimonthly window display. Morton Wright has been designated to provide signs announcing future meetings of the Branch.

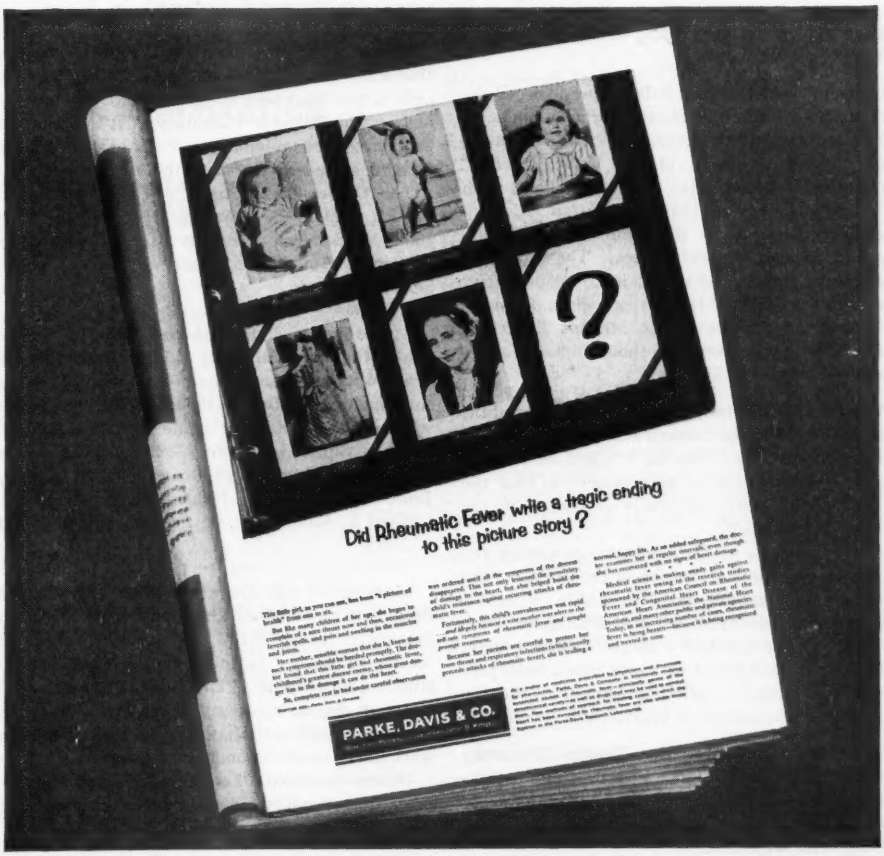
A meeting of the Branch was scheduled for October 15. St. John's, Fordham, and Brooklyn Colleges of Pharmacy were invited to attend and hear Mr. Billig speak on "Opportunities in Pharmaceutical Manufacturing Detailing Outfits."

On October 7, the **Massachusetts College of Pharmacy Student Branch** held its first meeting of the year. The record made by the officers of the A.PH.A. was played and "enjoyed by all." President Albert Donovan, the Branch's delegate to the Salt Lake City Convention, gave a report on the Convention's activities. A motion to support the resolution on the formation of a Student Section of the A.PH.A. was passed.

Officers elected to serve for 1953–54 are: Albert E. Donovan, Jr., president; Roger G. Cloutier, vice-president; Claire A. Pelletier, secretary; Edward L. Byrdy, treasurer; George E. Weiner, program chairman.

The Rutgers University Student Branch set up a display in observance of National Pharmacy Week in the lobby of the College of Pharmacy. The Branch also conducted a joint meeting with the

(Continued on page 730)



Here is the latest message in a 25-year-old series of Parke-Davis advertisements designed to bring home to people the importance of prompt and proper medical care.

Because this advertisement dramatically points out to parents the need for prompt attention to the tell-tale symptoms of rheumatic fever, it may conceivably play a vital part in the future life and happiness of some boy or girl you know.

We like to think that these ads of ours may be more *truly helpful* to people than almost any advertising they're reading or hearing these days. And we are convinced that these widely circulated* messages in the public interest are helping to generate among millions of people a heightened respect for the professions of medicine and pharmacy.

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*The advertisement here reproduced is appearing in *Life, Saturday Evening Post, Collier's, Parents', Time, Newsweek, This Week, Woman's Home Companion,* and *Good Housekeeping.*

MEDICAMENTA VERA · PD CO.

Parke, Davis & Company

DETROIT 32, MICHIGAN

Branches

•••••••••••••••••*from page 728*

Northern New Jersey Branch of the A.PH.A. on Founders' Day, October 7.

On October 7, Kenneth Ballard, president of the **University of California Student Branch,** spoke to the student body of the College of Pharmacy on the subject "Asia's Opinion of the United States." Mr. Ballard was one of the group of students from the University who visited Pakistan, Ceylon, Afghanistan, and India this summer on the PIC (Pakistan, India, Ceylon) project. The trip lasted about three months and was under the leadership of Richard Park, Harvard University. From Ballard's talk of Asiatic problems, the Student Branch is planning to sponsor several scholarships for a college of pharmacy in Asia.

The Wayne University Student Branch played the broadcast record from national headquarters at their October 12 meeting. The faculty and students of the College of Pharmacy were present to hear the record and "all were extremely interested in the message it contained."

After discussion of the resolution proposing the formation of a Student Section of the A.PH.A., the Branch voted unanimously in favor of it.

The Branch observed National Pharmacy Week by installing in the lobby of the College's main building a display based on drugs which have promoted community health and increased the life span throughout the last 33 years.

The first meeting of the **Purdue University Student Branch** was attended by 60 students who heard the record sent from Washington, D.C. At that meeting plans for future meetings and a membership drive were made.

District No. 4 of the Student Branches of the A.PH.A. will be the guests of the Branch at its meeting to be held at Purdue University, April 7–9, 1954.

In observance of National Pharmacy Week, members of the **University of Houston Student Branch** appeared on KUHT-TV. During the Open House program on October 5, Dr. George Webber, faculty adviser of the Branch; Donald Chase and Albert Picou, Jr., explained the activities of the A.PH.A. and the purpose of National Pharmacy Week. A demonstration was made showing accurate weighing on the torsion balance. On October 7, Dr. Don Kroeger, faculty sponsor of Phi Delta Chi Fraternity and active member of the A.PH.A., and two members of the Branch, Mrs. Jack R. Robinson and George Cummins, discussed "The Modes of Drug Administration." On October 9, a skit "Your Pharmacist" was presented.

In addition to this coverage on television, spot announcements were submitted to the three local radio stations, and exhibits depicting the progress of pharmacy since biblical times were shown in the Ezekiel W. Cullen building and the M. D. Anderson Library. Chairman of the Display Committee was Walter Smith, Jr.

In observation of National Pharmacy Week, the **University of Southern California Student Branch** held a two-hour assembly for the entire student body of the School of Pharmacy. At that time the Branch voted unanimously in favor of the resolution creating a Student Section in the A.PH.A.

The University of Southern California Student Branch elected the following officers for 1953–54: John N. Sanders, president; Gene Baker, vice-president; Anita June Chong, secretary; Richard Smith, treasurer.

At the first meeting of the fall term, on September 30, the **State University of Iowa Student Branch** devoted its program to the presentation of scholarships and awards for the 1953–54 school year. The scholarship awards were made by Dean Louis C. Zopf to Shirley Albrecht, Robert W. Beckman, Edwin R. Carlson, Floyd Domer, Leo F. Forsberg, James Hofer, Terry Jackley, Jerry M. Leflin, Clifford L. Mitchell, E. A. Prickett, and Eldon H. Wunder.

Members of the **Duquesne University Student Branch** have endorsed the creation of a Student Section in the A.PH.A., according to Anne K Keane, secretary. In endorsing the resolution, the students stated that: "The Student Section should serve as an added incentive to participation in Student Branch activities, and as a preview of the work in the parent organization."

During National Pharmacy Week, members of the Branch installed a display in the windows of the model pharmacy on campus.

Members of the **Oregon State College Student Branch** installed a National Pharmacy Week window display in the window of the J. C. Penney Company store in the business district of Corvallis. The first regular meeting of the Branch was held during the last week in September.

Southwestern State College Student Branch observed A.PH.A. Founders' Day with a special meeting on October 7. Highlight of the program was the playing of the record prepared by the ASSOCIATION headquarters. Following the record, the members of the Branch unanimously approved the resolution calling for the creation of a Student Section of the A.PH.A.

LOCAL BRANCHES

Newly elected officers of the **Chicago Branch** of the A.PH.A. are: Louis Gdalman, president; Ignatius Joseph Kaski, vice-president and program chairman; and Berj M. Varzhabedian, secretary-treasurer.

LEGAL ACTIONS OF THE

U.S. Food and Drug Administration

COURT JUDGMENTS AUGUST AND SEPTEMBER, 1953

Over-The-Counter Sales of Prescription Drugs

August, 1953

New Orleans, La. Sold amphetamines without physicians' prescriptions. 1 defendant fined $500.

September, 1953

El Cerrito, Calif. Refilled prescriptions for barbiturates without physicians' authorizations. 2 defendants: one individual fined $1,000; the other, $400; each placed on probation for four years.

Macon, Ga. Sold amphetamines and hormones without physicians' prescriptions. 1 defendant fined $50.

Macon, Ga. Sold amphetamines, barbiturates, and hormones without physicians' prescriptions. 1 defendant fined $50.

Macon, Ga. Refilled prescriptions for amphetamines and barbiturates without physicians' authorizations. 4 defendants: each fined $50.

Macon, Ga. Sold amphetamines, barbiturates, and sulfonamides without physicians' prescriptions. 2 defendants: each fined $50.

Clinton, Iowa. Sold amphetamines and barbiturates without physicians' prescriptions. 1 defendant fined $625 and court costs of $24.60.

Covington, Ky. Sold amphetamines and barbiturates without physicians' prescriptions. 2 defendants: one fined $400; the other, $200 and court costs of $35.

Durham, N.C. Sold and refilled prescriptions for barbiturates, Ergoapiol, and thyroid without physicians' authorizations. 4 defendants: firm and one individual each fined $500 and placed on probation for two years; other two individuals each fined $250.

Philadelphia, Pa. Sold sulfonamides without physicians' prescriptions. 1 defendant fined $50.

Dallas, Tex. Sold amphetamines without physicians' prescriptions. 1 defendant fined $1.

Misbranded Drugs

August, 1953

Los Angeles, Calif. Pituitary Solution U.S.P. and Obstetrical Pituitary U.S.P. were below U.S.P. standards. 1 defendant fined $50.

Loupurex, Pa. Bone meal and bone meal tablets contained false and misleading statements that ealcium, phosphorus, and fluorine, as supplied by the drugs, would prevent or remedy tooth decay, tense feeling, jagged nerves, restlessness, sleeplessness, tired feeling after shopping, hemorrhages, non-healing wounds, stunted growth, low blood pressure, angina pectoris, facial neuralgia, "migraine" headache, easy dislocation of the hip, swelling of the ankles, boils, psoriasis, faintness, weakness of the lower limbs, night sweats, hoarseness, dropsy, epilepsy, heart conditions, premature graying of the hair, contracting of the esophagus, blood tumors, varicose veins, and weakening of the ligaments and elastic tissues permitting ankles to turn, and would enable the blood stream to provide normal body functioning, eliminate danger of gangrene after operations, and furnish the proper constituents to keep the human body in good nutrition. 1 defendant fined $750.

September, 1953

Cedar Falls, Iowa. Ironated Hog Liquid contained false and misleading statements that the drug would furnish a significant amount of iron; that it contained potassium permanganate; that it was effective for controlling the ordinary types of scours in hogs; that it was effective for a run-down condition in cows and for slow-growing, unthrifty pigs; and that it was an effective remedy for necro. Black Hawk Special Dairy Product contained false and misleading statements that the drug would be an effective treatment and preventive for shy breeding, anemia, and lump jaw. 2 defendants: firm fined $500 and court costs; individual fined $20.

New York, N.Y. Testrex was deficient in methyltestosterone. 2 defendants: firm fined $250; individual fined $600.

St. Louis, Mo. Cal-D-Fer, mannitol hexanitrate with phenobarbital, and triple sulfa were deficient in active ingredients. 1 defendant (firm) fined $800.

Your son and daughter, and your apprentice can gain an interesting and successful career in prescription, hospital and manufacturing Pharmacy through degree courses at this institution, oldest yet most modern in the Americas. Studies lead to B.Sc., M.Sc. and D.Sc. degrees. Schools of Chemistry, Bacteriology and Biology also. Write for free catalog.

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BY GEORGE B. GRIFFENHAGEN*

XI. THE BRINGHURST APOTHECARY SHOP

Address: Mystic Seaport, Marine Historical Association, Inc., Mystic, Connecticut.
Hours Open: Daily: 9:00 A.M. to 5:00 P.M.
Admission: (to grounds) $1.00; children $0.25.
Floor Space: 360 square feet (separate building).
Owner: Marine Historical Association, Inc.
History: The Bringhurst Apothecary Shop was founded in 1793 in Wilmington, Del., by Dr. Joseph Bringhurst, who fled from Philadelphia to escape the yellow fever epidemic in 1790. It remained in the possession of and was operated by members of the Bringhurst family for 146 years (1793–1939). The fixtures were acquired by the Smith, Kline and French Laboratories in 1947 at which time it was restored and first exhibited at the 100th Anniversary Convention of the American Medical Association in Atlantic City, N. J., the same year. The restoration was given to the Mystic Seaport Marine Historical Association in 1952, and it was reopened and dedicated on August 19, 1953, in a nationwide radio broadcast.
Description: The restoration is an authentic reproduction of a drugstore of the colonial period containing over 1,000 specimens including 383 hand-blown bottles.
References: *Northwestern Druggist*, **55:** No. 7, 34 (1947); *J.A.M.A.*, **152:** 36 (May 23, 1953) Adv.

XII. THE COLONIAL APOTHECARY SHOP

Address: The Historical Library, Yale Medical Library, 333 Cedar Street, New Haven, Connecticut.
Hours Open: Monday through Friday, 8:30 A.M. to 5:00 P.M.
Admission: Free.
Floor Space: Approximately 200 square feet in a room also containing a 17th century Italian pharmacy restoration.
Owner: The Historical Library, Yale Medical Library.
History: The fixtures and equipment were collected from eastern Connecticut, mainly from Stonington, and date from 1845 to 1880. The hand-blown glassware was largely collected from Old Mystic and Hope Valley. The entire collection was donated to the Yale Medical Library by Dr. Edward Clark Streeter in 1941 when it was opened for exhibition. The restoration is housed in a room on the second floor of the Yale Medical Library.
References: *First Annual Report of the Historical Library*, Yale University School of Medicine, June 30, 1941, New Haven, Conn., 24; *Ciba Symposia*, **6:** 2083 (1945).

---

* Associate Curator, Division of Medicine and Public Health, Smithsonian Institution, Washington, D. C., and Consultant to the A.Ph.A. Museum. The 11th and 12th of a series of monographs describing apothecary shop restorations on exhibition in the United States.

A new product of Lederle research

REVICAPS*

REDUCING VITAMIN CAPSULES d-Amphetamine — Vitamins and Minerals

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REVICAPS (REducing VItamin CAPSules) is a new, scientifically formulated product, designed to help control obesity. It is now being announced to physicians and will have continued heavy direct mail support. REVICAPS is a highly profitable, "repeat" item. Order your stock of this new type of vitamin product today and be prepared to fill Rx.

help control obesity

reduce appetite

provide essential diet factors

Each ⬭ *contains:*

d-Amphetamine Sulfate	5.00 mg.
Vitamin A	1670 U.S.P. Units
Vitamin D	167 U.S.P. Units
Thiamine HCl (B_1)	1.00 mg.
Riboflavin (B_2)	1.00 mg.
Niacinamide	20.00 mg.
Calcium Pantothenate	0.34 mg.
Pyridoxine HCl (B_6)	0.34 mg.
Folic Acid	0.34 mg.
Vitamin B_{12}	0.34 mcgm.
as present in concentrated extractives from streptomyces fermentation	
Ascorbic Acid (C)	20.00 mg.
Methylcellulose	200.00 mg.
Iron ($FeSO_4$ exsiccated)	3.34 mg.
Calcium ($CaHPO_4$)	140.00 mg.
Phosphorus ($CaHPO_4$)	108.00 mg.
Iodine (KI)	0.50 mg.
Fluorine (CaF_2)	0.10 mg.
Copper (CuO)	1.00 mg.
Potass um (K_2SO_4)	5.00 mg.
Manganese (MnO_2)	1.00 mg.
Zinc (ZnO)	0.50 mg.
Magnesium (MgO)	1.00 mg.
Boron ($Na_2B_4O_7$)	0.10 mg.

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Bush, Margarete W., Bakersfield
Carmona, M. Zunigov, Los Angeles
Goodspeed, George F., Los Angeles
Hardin, George D., San Mateo
Hill, Dale H., Los Angeles
Huffman, C. L., Hanford
Kiss, Geza J., San Bernardino
Largent, Howard B., Menlo Park
La Rosa, August S., San Jose
Levant, Frank A., Inglewood
Liautaud, James E., Los Angeles
Maddux, Marjorie C., Chico
Powers, Carroll F., Inglewood
Sebaugh, A. Allen, Woodland Hills
Sister Marie Teresa Fischer, Los Angeles
Small, James M., Los Angeles
Snyder, Louis M., Los Angeles
Vogelsberg, Julius C., Riverside
Wessel, Louis H., Vallejo
Woolwine, Don, Selma
Zizzo, James G., Lomita Park

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McKee, William E., Leadville

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Shapiro, Jack, Oaklawn
Starshak, J. J., Chicago
Stroh, Earl J., Wilmette
Vick, O. R., Aurora

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Hardy, Mary E., Fort Wayne
Hughel, Donald R., Anderson
Money, Marion R., Spencer
Weinland, Joseph L., Brazil

IOWA

Booth, Lynn E., Hawarden
Sembower, James C., Des Moines
Woods, Calvin, Fort Dodge

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Gray, Harry, Jr., Independence
Perry, George T., Mission
Steinhauser, Bernard, Hiawatha

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Snider, Doyal, Anchorage
Spoo, William L., Jr., Louisville
Thompson, Richard A., Louisville
Wasson, Melvin K., Louisville
Whitehead, Ralph E. Jr., Louisville

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Sams, Ethel W., Denham Springs

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Spigelmire, Charles E., Baltimore

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Roche, Henry J., Hillside
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Sister Barbara Marie, Trenton
Stepanian, Marcel R., Wood-Ridge
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Smith, Winfield F., Sr., Topton
Thomas, Harold C., Jr., Orwigsburg
Timo, John E., Bentleyville

RHODE ISLAND

Fricker, Raymond F., Providence
Konicov, Monte, Providence

SOUTH CAROLINA

Threadgill, James N., Greenville

SOUTH DAKOTA

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TENNESSEE

Godwin, Katherine S., Linden

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FOREIGN

Button, Thomas M., Winnipeg, Man., Canada
Goodman, Morris, Outremont, Quebec, Canada
Price, James T., Toronto, Ont., Canad

BRIEFLY NOTED

COLLEGES

A Wisconsin Pharmacists' Institute was sponsored by the College of Pharmacy, **University of Wisconsin,** on Thursday, Friday, and Saturday, October 22–24. The use and misuse of familiar proprietary products received major emphasis in the program of the meeting, which featured outstanding speakers and professors from colleges of pharmacy in the east and middle west. Dr. Hugo H. Schaefer, dean, Brooklyn College of Pharmacy, Brooklyn, N.Y., was speaker at the dinner on the opening day. His topic was "A Remedy for the Misuse of Remedies." William S. Apple, coordinator of the University of Wisconsin Extension Services in Pharmacy, presided at the opening session, and delivered a critique of the Institute at the closing session on Saturday morning, October 24.

The Continuation Center and College of Pharmacy of the **State University of Iowa** held a Pharmacy Seminar, November 13–14. Speakers scheduled to address the meetings included Dr. H. F. Fraser, Assistant Director of Research of the National Institute of Mental Health Addiction Center, Lexington, Ky. Dr. Fraser's topic was: "Chronic Barbiturate Intoxication."

More than 100 pharmacists and guests attended the 17th Druggist Business Conference held at **Purdue University** on October 29. The Business Conferences were first begun in the early 1930's. Donald W. Harding of the Pharmacy Extension Department was general chairman.

Joseph H. Stamler, counsel for the New Jersey Pharmaceutical Association, was one of the principal speakers at a one-day pharmacy meeting sponsored by the **University of Michigan,** College of Pharmacy, Ann Arbor, on October 29. Stamler spoke on the subject "What Recent Court Decisions Mean to Pharmacy." Other speakers included H. W. Adkins, executive vice-president of Yahr-Lang, Inc., Milwaukee, Wis., wholesalers, and Adam S. Bennion, regent of the University of Utah.

Rutgers College of Pharmacy, Newark, N.J., will hold open house on December 12, 1953, to celebrate the latest in a series of improvements to its physical establishment. These include a new prescription laboratory and library facilities. The College is also drawing up preliminary plans for its 1954 Rutgers Pharmaceutical Conference, slated for May 12, 1954. Dr. John L. Voigt is director of the Rutgers' extension service program.

Dr. George Urdang delivered the fourth Edward Kremers Memorial Lecture, October 21, 1953, at the **University of Wisconsin.** Dr. Urdang paid tribute to his former co-worker, and quoted Dr. Kremers' educational philosophy as "the end to be attained is to lead the student to think and reason for himself." The two men worked for three years in the preparation of the now internationally accepted "History of Pharmacy." Dr. Kremers was director of the University of Wisconsin's School of Pharmacy for 43 years, and died in 1941.

Three new graduate assistants, Glenn F. Kiplinger, William Schobel, and Austin H. Dulin, have been added to the staff of the College of Pharmacy, **Butler University,** Indianapolis, Ind. Wallace E. Rutherford, Jr., has been named instructor in the Department of Pharmacy.

Charles G. Baker, retail pharmacist of Georgetown, Mass., and Edward J. Breck, vice-president of John H. Breck, Inc., have been named Trustee and Trustee of Funds, respectively, of the **Massachusetts College of Pharmacy.** Both are former graduates of the college, and also are A.PH.A. members.

Students of the class in hospital pharmacy at **Southwestern State College of Pharmacy,** Weatherford, Okla., attended the dedication of the new Veterans Administration Hospital in Oklahoma City, on October 4. Upper classmen of the College visited the pharmaceutical manufacturing facilities of Upjohn, in Kalamazoo, Mich., and Parke-Davis, in Detroit, during the week, October 11–18.

Dr. Leslie L. Eisenbrandt, a native of Chanute, Kan., became dean of the School of Pharmacy, **University of Kansas City,** in August. Dr. Eisenbrandt received his Ph.D. at Rutgers University in 1936, and joined the faculty of the University of Kansas City the same year, as a physiologist. In 1947 he turned his full attention to the field of pharmacology. Dr. E. A. Holstius and Mr. Lyle Willits have also been appointed to the faculty, as associate professor and assistant professor of pharmacy, respectively.

Dr. Robert L. Boblitt and Dr. Gail Stapleton have joined the faculty of the **University of Houston,** College of Pharmacy, as assistant professors of pharmaceutical chemistry. Albert Picou, Jr., was recently elected president of Phi Delta Chi chapter at the same university.

(Continued on next page)

Briefly Noted

• • • • • • • • • *from preceding page*

AT RANDOM

The Antibiotics Division of the Department of Health, Education, and Welfare sponsored an **Antibiotics Symposium** in Washington, October 28, 29, and 30. Outstanding research scientists attended, with high interest being expressed in the newer broad spectrum products currently being introduced. Several of the speakers issued warnings against too indiscriminate use of both the old, as well as new, forms.

Dr. Glenn Sonnedecker, secretary of the American Institute of the History of Pharmacy, presented the first **George Urdang Medal** to Dr. Josef Anton Häfliger of Switzerland, at the inaugural meeting of the Academie Internationale d'Histoire de la Pharmacie, in Paris, France, on September 17. In his presentation remarks, Dr. Sonnedecker paid tribute to Dr. Häfliger's outstanding contributions to "systematizing our knowledge of the tangible remnants of the pharmaceutical past." Dr. Häfliger recently celebrated his 80th birthday. Following his European trip, Sonnedecker returned to the United States in time to deliver a lecture on "Art and Pharmacy" at the Milwaukee Art Institute's exhibition, "The Story of Medicine and Art." The special exhibit at the Museum featured paintings and *objets d'art* on loan from collections from all areas of the country.

Dr. Robert P. Fischelis, secretary of the AMERICAN PHARMACEUTICAL ASSOCIATION, represented the ASSOCIATION at the cornerstone laying ceremonies of the **Armed Forces Institute of Pathology,** Walter Reed Army Medical Center, Washington, D.C., on October 20. The principal address was delivered by Melvin A. Casberg, M.D., Assistant Secretary of Defense.

The New Jersey Pharmaceutical Association has expelled one of its members after he was convicted of illegal sale of drugs. Noting that the Association was striving constantly to raise ethical standards in pharmacy, John J. Debus, the Association secretary, said: "He has traded on his professional prestige for personal gain to the detriment of public welfare."

Fred M. Truett was elected president of the **National Wholesale Druggists Association** at its annual meeting in Los Angeles, October 3 to 7. Leib L. Riggs, chairman of the House of Delegates represented the A.PH.A. at the convention.

Dr. Eugene L. Daily has been elected executive vice-president of **Eaton Laboratories, Inc.,** professional subsidiary of Norwich Pharmacal Company. Melvin C. Eaton, president of Norwich, recently presided at the ground-breaking ceremonies for the company's new research laboratory near Norwich, N.Y. The building is scheduled for completion in the fall of 1954.

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Rauwiloid + Veriloid Tablets 688
Revicaps 688
Teridax Tablets 688
Tussar 688

cover
680
675
685

cover

cover

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indications

To promote appetite and growth in the below-par child.

To shorten convalescence through increased appetite.

As an adjunct in treating the chronically ill or undernourished patient.

As a nutritional supplement in chronic diarrhea and celiac disease.

package size
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minimum retail price
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dosage
One tablet daily—or as directed by the physician.

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PUBLISHED by the American Pharmaceutical Association. Publication Office: 20th and Northampton Streets, Easton, Pa. Editorial office (and address for all correspondence): 2215 Constitution Ave., N. W., Washington 7, D. C.

ANNUAL SUBSCRIPTION—Journal of the American Pharmaceutical Association complete (both editions): United States and Pan America $7; Canada $7.70; other foreign $8; members of the American Pharmaceutical Association with dues, $4. Each edition, Scientific Edition or Practical Pharmacy Edition: United States and Pan America $4; Canada $4.35; other foreign $4.50. Single numbers, either edition: United States and Pan America $0.35; Canada $0.40; other foreign $0.50.

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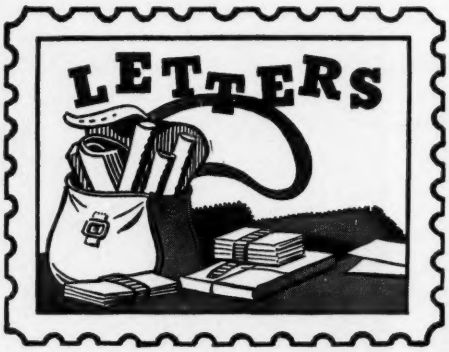
ENTERED as second-class matter January 23, 1917, at the Post Office at Easton, Pennsylvania, under the act of March 3, 1879, as 24 times a year; Scientific Edition monthly on the 5th; Practical Pharmacy Edition monthly on the 20th. Acceptance for mailing at a special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 10, 1918.



National Pharmacy Week

Sirs:

I would like to thank you for the wonderful co-operation you have shown our branches during National Pharmacy Week. I can easily say that we had a better National Pharmacy Week than ever before.

Ann Arbor, Mich. RICHARD D. ALLEN

National Pharmacy Week Record

Sirs:

. . . It is my wish to thank you again most sincerely for the record sent to us by your office. We are especially grateful to you for allowing us to keep this greeting, since we will assuredly find use for it in the future.

Bronx, N.Y. MAURICE T. LEBEL

Renewal of Membership

Sirs:

Thank you for your letter in reference to my being eligible for membership renewal in the ASSOCIATION on an associate member basis while in service.

I am fully aware of the services rendered by our organization in the past and of the huge task ahead; likewise, I am aware that in order for us to achieve these goals, every member must give his full co-operation financially and otherwise. On the basis of these facts, I prefer to remain on the active membership rolls.

Fort Lawton, Wash. PFC. R. E. MEYERS

Pharmacists in the Armed Services

Sirs:

Enclosed you will find my check for membership in the ASSOCIATION. I have enjoyed receiving the *Practical Pharmacy Edition,* and hope it will continue to be mailed to me.

I would also like to congratulate you at this time on the recent work that has been done on "the pharmacist and the armed services." Being very interested in the outcome, I hope something can be done to improve the rating of a pharmacist in the service. I think more support from fellow members would help.

Richmond, Va. GUY B. RICE, JR.

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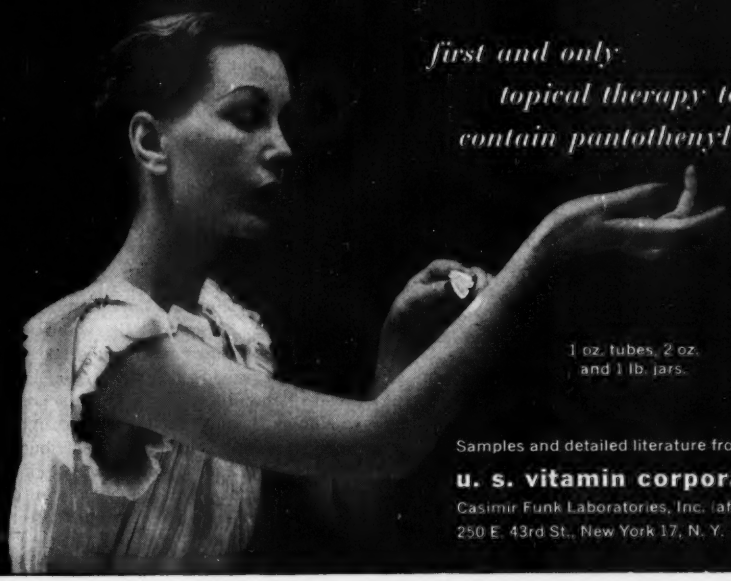

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and 1 lb. jars.

Samples and detailed literature from
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PROGRESS IN MEDICINE

Note on Vitamin B_{12} and Intrinsic Factor Concentrate*

On the recommendation of the U.S.P. Anti-Anemia Preparations Advisory Board, the combination, Vitamin B_{12} with Intrinsic Factor Concentrate, has been admitted by interim revision to U.S.P. XIV. For pharmacopeial purposes, the Board does not regard this combination as a mixture inasmuch as the effect of the combination is merely to enhance the absorption of vitamin B_{12} when given orally.

The Board recommended against the separate admission and definition of the intrinsic factor concentrate supplied without vitamin B_{12} activity. As in the past, the Board will not concern itself with pharmaceutical preparations consisting of other vitamins or minerals with Vitamin B_{12} with Intrinsic Factor Concentrate U.S.P. In order to avoid making misleading statements in the event that loss of potency has occurred as a result of the mixture, it is suggested that the manufacturers place an asterisk after the statement of unitage and thus refer to a footnote such as "Potency established prior to mixture with other ingredients."

The Board proposes that the amount of vitamin B_{12} with intrinsic factor concentrate constituting 1 U.S.P. Unit (oral) shall contain vitamin B_{12} activity equivalent to not more than 15 mcg. of cyanocobalamin and not more than 300 mg. of intrinsic factor concentrate by dry weight.

Due to the uncertainties of determining by microbial assay the vitamin B_{12} activity in this preparation, an excess up to 20 per cent above the stated limit of 15 mcg. of vitamin B_{12} equivalence per U.S.P. oral unit may be allowed.

The Board recommends that there be no labeled declaration of the content of vitamin B_{12} or of intrinsic factor concentrate. The position was taken that the clinical activity of the combination, like that of other oral preparations containing vitamin B_{12} for use in the treatment of pernicious anemia, can be expressed meaningfully only in U.S.P. Units and that reference to the amount of vitamin B_{12} or to the weight of intrinsic factor concentrate would be unnecessary and possibly misleading.

Applications for approval of the products represented to be vitamin B_{12} with intrinsic factor concentrate should be submitted to the Secretary of the Board, Dr. Irving M. London, College of Physicians and Surgeons, Columbia University, 620 West 168th Street, New York 32, N.Y. Application forms as well as copies of the pamphlet "Directions for the Submission of Data by Manufacturers" are available: Pharmacopeia Building, 46 Park Ave., N.Y. 16, N.Y.

* From the Seventh Announcement of the U.S.P. Anti-Anemia Preparations Advisory Board, November 13, 1953.

Hepatitis from Pooled Plasma

A follow-up study of 587 American soldiers who were Korean war casualties, reported by three physicians, shows that 21.9 per cent of those who received both plasma and blood developed hepatitis with jaundice (total serum bilirubin 2 mg. per 100 cc. or more). The incidence of hepatitis among those who received only blood was 3.6 per cent. The mean incubation period for this hepatitis was 90.3 ± 11.7 days, indicating that probably all the cases represented long-incubation-period hepatitis. During the latter period covered by the survey, plasma irradiated with ultraviolet light was used, but a month-by-month breakdown of the incidence of hepatitis reflected no significant prevention of hepatitis by the irradiation.

(Sborov, V. M., Giges, B., and Mann, Joseph D., *Arch. Internal Med.*, **92:** 678, November, 1953.)

New Diagnostic Test for Syphilis

Two Johns Hopkins University bacteriologists, Dr. Robert A. Nelson and Dr. Manfred M. Mayer, who developed a more accurate method of diagnosing syphilis and provided a new weapon in controlling spread of the disease, were recently presented with the Kimble Glass Methodology Research Award for an outstanding public health contribution.

The new method involves the use of an antigen composed of the actual disease organism obtained from a syphilis-infected rabbit to detect syphilitic antibodies in a sample of the patient's blood. If the patient has syphilis, antibodies created by

nature in his blood to fight the infection will kill or immobilize the syphilis spirochete from the rabbit. In the absence of the disease and the resultant syphilis-fighting antibodies, the rabbit spirochetes remain mobile and virulent.

Previously, physicians have been handicapped in their diagnosis and treatment of the disease because of the lack of a specific syphilis antigen. In cases where the patient had no history or clinical evidence of syphilis, but standard tests indicated a possibility of infection, the physician had no accurate method of determining the cause of the positive reaction in the original tests. The new method, known as Treponema Pallidum Immobilization Test, eliminates all false positive reaction and, for the first time, provides the physician with a test which is specific for syphilis.

Used on 500 persons who exhibited a positive syphilis reaction to the standard Navy tests, the Nelson-Mayer method showed a negative reaction in 42 per cent of the patients.

In addition to its other advantages, the new testing method will be an invaluable aid to the physician in measuring the extent and degree of syphilis infection in a patient and in testing his response to treatment.

Thoroughly tested in laboratories and clinics here and abroad through the International Cooperating Laboratories of the World Health Organization program, the Nelson-Mayer test at present is not practical for routine use, especially in smaller laboratories. However, it is being standardized and eventually will be available to all laboratories and clinics.

(Press Release, American Public Health Association, New York, November 9, 1953.)

Oral Hydrocortisone in Sprue Therapy

Three New York physicians report their observations of the responses of 17 patients with sprue syndrome when hydrocortisone acetate or hydrocortisone free alcohol (compound F) was administered orally. All the patients had exhibited various degrees of resistance to standard sprue therapy. Five patients, who have been maintained for periods up to three years with either cortisone by mouth or corticotropin (aqueous or gel) parenterally, when treated with hydrocortisone acetate, administered orally in five and parenterally in two courses, in addition to "basic" antianemia therapy, showed undesirable reactions: diarrhea, steatorrhea, loss of weight, weakness, apathy. etc. However, when the free-alcohol form of hydrocortisone was given orally (initially 80 mg. daily in two to four equally divided doses; then reduced 10–20 mg. every one to two weeks to maintenance doses of 20–30 mg. daily, given in one dose half an hour before breakfast), it was well absorbed from the gastrointestinal tract and promptly controlled the symptoms of sprue.

The physicians state that oral administration of hydrocortisone free alcohol has no curative effects as the extent of remission varies with each patient. One to three weeks after stopping the hydrocortisone free-alcohol therapy, clinical relapses occurred despite continued administration of liver extract, vitamin B_{12}, and/or folic acid. Therapy-resistant sprue patients are being maintained on the smallest possible doses of hydrocortisone free alcohol with dietary control and additional therapy.

(Adlersberg, D., Colcher, H., and Wang, Chun-I, *Arch. Internal Med.*, **92:** 615, November, 1953.)

Rectal Suppositories as Substitutes for Enemas

Use of a rectal suppository instead of enemas during the postpartum state was found to minimize patient discomfort, according to a report by Dr. E. A. Banner, obstetrician and gynecologist at the Mayo Clinic, Rochester, Minn. No complications have been noted as a result of the routine use during 18 months in the Clinic's obstetrical service of a suppository prepared from the following formula:

Sodium bicarbonate	0.60 Gm.
Potassium bitartrate	0.90 Gm.
Calcium silicate	0.05 Gm.
Bentonite U.S.P. XIII	0.30 Gm.
Polyethylene glycol	0.20 Gm.
Dextran 282	0.05 Gm.
Cocoa butter	0.05 Gm.
Vegetable lecithin	0.10 Gm.

Talc *q.s.* to make one suppository.

The suppository, when in contact with the rectum, develops a minimal amount of carbon dioxide, which, when liberated, stimulates the peristaltic and defecation reflexes. A single suppository was successful in approximately 60–65 per cent of all patients. When evacuation did not occur after insertion of one suppository, another was inserted 30 minutes later. The second suppository increased the over-all efficiency approximately 5 per cent. No lubricant is required for the insertion.

(Banner, E. A., *Proc. Staff Meetings Mayo Clinic*, **28:** 567, October 7, 1953.)

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LEGAL ACTIONS OF THE

U.S. Food and Drug Administration

COURT JUDGMENTS OCTOBER, 1953

Over-The-Counter Sales of Prescription Drugs

Phenix City, Ala. Sold sulfonamides without physicians' prescriptions. 1 defendant fined $25.

Meridian, Miss. Sold amphetamines and barbiturates without physicians' prescriptions. 2 defendants: each fined $50.

St. Louis, Mo. Sold amphetamines, barbiturates, hormones, sulfonamides, and apiol and ergot without physicians' prescriptions. 1 defendant fined $300.

Newark, N.J. Sold amphetamines, barbiturates, and penicillin without physicians' prescriptions. 1 defendant fined $1,000 and given a six-month jail sentence.

Newark, N.J. Sold barbiturates without physicians' prescriptions. 1 defendant fined $1,000 and given a six-month jail sentence.

Caddo, Okla. Sold amphetamines and barbiturates without physicians' prescriptions. 1 defendant fined $100.

Johnson City, Tenn. Sold amphetamines and barbiturates without physicians' prescriptions. 2 defendants: fined a total of $1,500; one defendant placed on probation for 18 months.

Misbranded Drugs

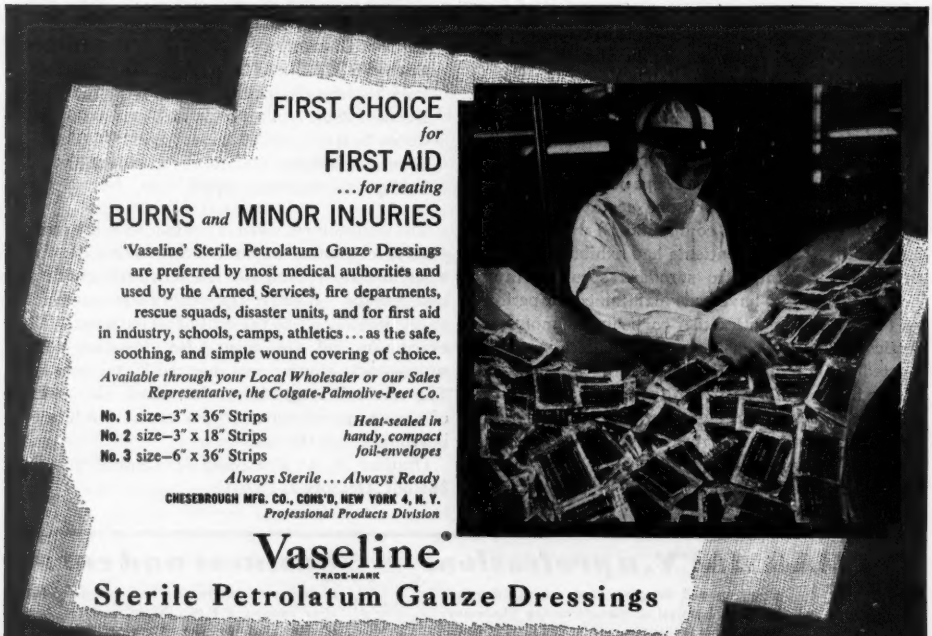
Chicago, Ill. Desoxyephedrine hydrochloride had been substituted for amphetamine sulfate. 1 defendant fined $200.

Manchester, N.H. Shipped Abbe Hamen Teas (drugs) misbranded by false and misleading therapeutic claims on their labels: Formula No. 6 was recommended for epilepsy, all diseases of the nerves, insomnia, eclampsia, and hysteria; Formula No. 11 was recommended for obesity, paralysis, goiter, and arteriosclerosis; Formula Nos. 1, 11, and 13 were recommended to enable organs of the body that refuse to perform their usual functions, to again operate normally, and to heal illnesses and correct organic disorders brought about by daily abuse during months and years. Labeling of all the drugs failed to bear adequate directions for use. 1 defendant given a three-month suspended jail sentence and placed on probation for two years.

New York, N.Y. Estrogens were below the potency declared on the label. 1 defendant fined $200.

Temporary Injunction Granted

Peoria, Ill. Company temporarily restrained from interstate shipments of barbiturates, sulfa drugs, etc., misbranded because their strength differed from that which they were represented to possess.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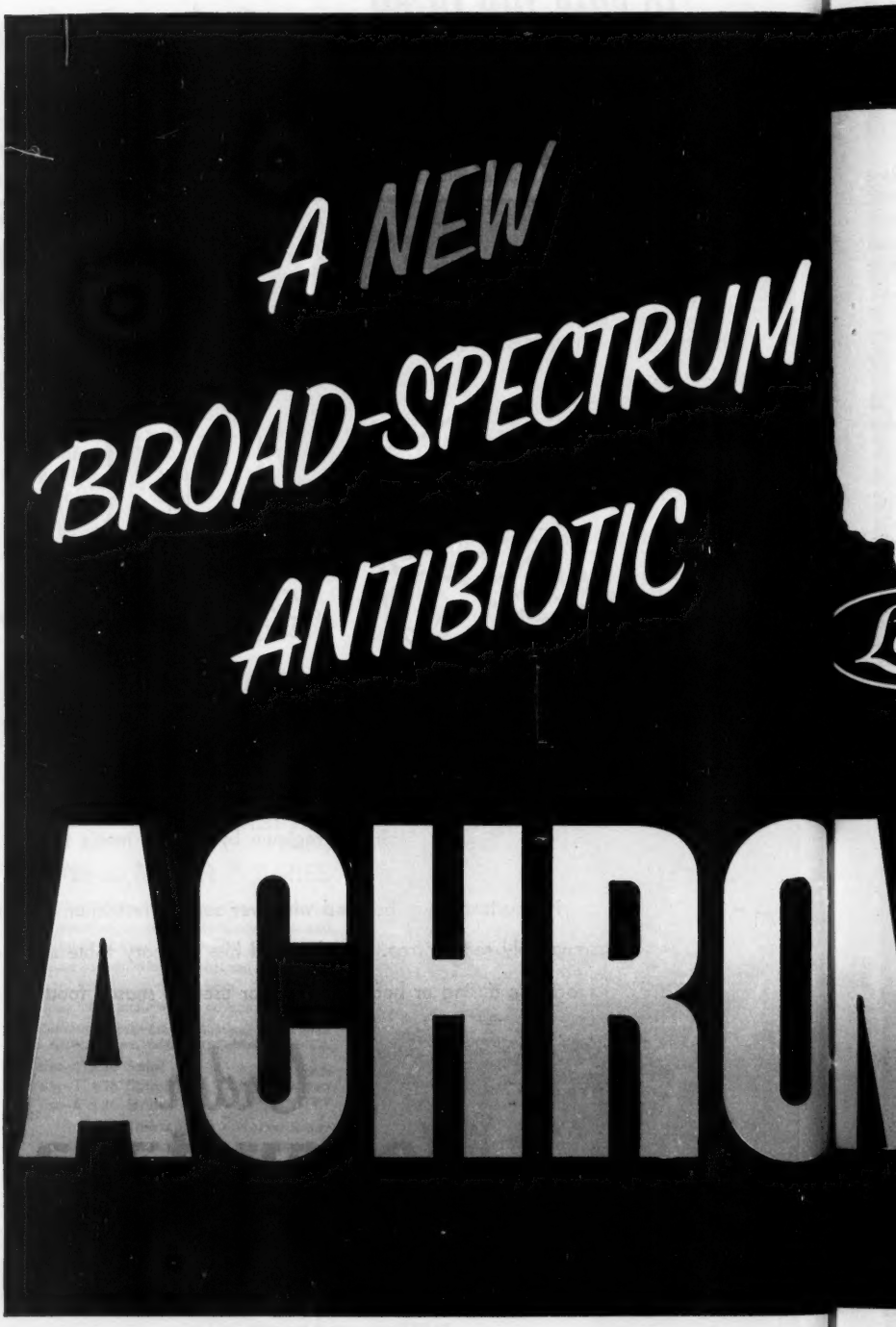
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Viscosity of Ophthalmic Solutions

What can be added to ophthalmic solutions to increase their viscosity?—J. G., Washington, D.C.

Ophthalmic solutions may be made more viscous and hence more effective by the addition of methylcellulose. Dr. Robert C. Welsh, (*South. M. J.*, **46**: 819, 1953), suggests that the best concentration, provided by a 0.5 to 0.8 per cent solution of the 4,000 centipoise variety, be specified in the prescription. The 0.5 per cent vehicle may be used with antibiotics and sulfonamides; the 0.5 to 0.8 per cent with cortisone. The viscid agent is a nonirritating, water-soluble, and chemically inert colloid. Solutions of the pure chemical do not support bacterial or fungal growth, but a suitable antibacterial agent should be included in the compounded product.

Dhobie's Lotion

Dhobie's solution was described as a solution of salicylic acid in alcohol (see THIS JOURNAL, **14**: 614, 1953).

The following formula is used at a U.S. Army hospital to prepare Dhobie's lotion:

Castor oil	7.8
Salicylic acid	6.0
Alcohol 95 per cent *q.s.*	30.0

Belladonna Tincture and Phenobarbital Elixir

Can you provide me with a formula for a low alcohol elixir containing 0.5 cc. of belladonna tincture and 1/4 gr. of phenobarbital per 4 cc.?—E. S., Texas.

The use of propylene glycol in a formula for phenobarbital elixir was reported by S. J. Greco (see THIS JOURNAL, **14**: 424, 1953). The use of essential oils to mask the flavor of propylene glycol was reported by H. R. Mehta and F. G. Drommond before the Section on Practical Pharmacy at the 1953 meeting of the A.PH.A. at Salt Lake City, Utah. They reported that anise oil combined with methyl salicylate, peppermint oil, sassafras oil, or orange oil was most preferred by their taste panel.

The following formula yields a clear product:

Phenobarbital	0.4 Gm.
Propylene glycol	60.0 cc.
Belladonna tincture	12.5 cc.
Sweet orange peel tincture	3.0 cc.
Anise oil	0.1 cc.
Syrup	15.0 cc.
Water *q.s.*	100.0 cc.

Dissolve the phenobarbital in 40 cc. of propylene glycol, add the belladonna tincture and mix. Mix the anise oil and the sweet orange peel tincture, add the mixture to the propylene glycol solution, and mix. Add the syrup, mix, add 20 cc. of propylene glycol and enough water to make 100 cc.

The clear green solution can be colored by the addition of amaranth solution if the reddish color is preferred. Other combinations of the masking oils can be tried to obtain a desirable flavor.

Reduction of the propylene glycol to 50 cc. yielded a turbid product. Addition of two drops of Tween 20 did not remove the turbidity.

Human Antihemophilic Globulin

Where can the antihemophilic substance globulin fraction of blood that was separated by Dr. Kohn be obtained?—R. G. D., New York.

Human Antihemophilic Globulin for the protection of hemophiliacs is produced by Cutter Laboratories, 4th and Parker Streets, Berkeley 10, Calif.

Each lot of human blood fractions is checked by the Commission on Plasma Fractionation and Related Processes and by the National Institutes of Health before release.

Fraction I contains the protein substance which will rectify the coagulation defect in hemophilia. Two hundred to 600 mg. of Fraction I, reconstituted in 5 to 30 cc. of sterile water and given intravenously, will temporarily shorten the coagulation time in hemophilia in the same way as fresh blood or plasma. Fibrinogen constitutes 65 per cent of the protein of Fraction I.

Phenobarbital Elixir and Magnesia Magma in Mixture

Why does the following prescription turn a greyish-green color?—J. D. E., Montana.

Syrupus Rubi Idaei	*fl. dr. i*
Belladonna tincture	*fl. dr. ij*
Sodium bromide	*dr. iv*
Phenobarbital elixir	
Magnesia magma	*aa q.s. ad fl. oz. vj*

Sig.: Fl. dr. ij with water tid p.c.

On standing, the magnesium hydroxide adsorbs the amaranth from the phenobarbital elixir, leaving a colorless supernatant liquid. The mixture of

(Continued on page 748)

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Information Service

• • • • • • • • • • • • *from page 746*

the colors from belladonna tincture and raspberry syrup would account for the grayish-green color observed. It would be better to dispense the magnesia magma separately.

Sterile Procaine Hydrochloride Solutions

Please give me any information you have on the preparation of a colorless, sterile solution of procaine hydrochloride. I have heard that some hospitals are producing a colorless product.—S. W. M., Arizona.

The new *Formulary and Therapeutic Guide* of the New York Hospital describes procaine hydrochloride injections as colorless to slightly yellow, sterile solutions.

Procaine hydrochloride solutions can become discolored due to oxidation of the solute. The oxidation is enhanced by traces of metal in the distilled water, unclean apparatus, excessive heating, and high *p*H. The *p*H of the solution should be kept between 3.3 and 5.5, preferably near the lower figure.

Addition of 0.1 per cent of sodium bisulfite or sodium metabisulfite inhibits the oxidation. *The British Pharmacopoeia* adds 0.1 per cent of chlorocresol, and directs heating at 98–100° C. for 30 minutes to sterilize.

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Raspberry Juice

How should Raspberry Juice U.S.P. be prepared when "the fresh ripe fruit" is not available?—M. Z., Canada.

The reason for having the monograph on Raspberry Juice in the U.S.P. XIV is to have an official product from which to make Raspberry Syrup U.S.P. The Syrup is stable enough to carry through the off-season of fresh fruit

An alternate procedure for the preparation of raspberry juice and raspberry syrup is suggested by W. G. Dudley, Jr. (private communication). He suggests the use of frozen commercial raspberries when the fresh fruit is not available. The frozen product is allowed to stand in a covered dish until completely thawed, then follow the official directions for the preparation of the juice and syrup, except for the addition of 10 per cent less sucrose to allow for sugar that has been added to the frozen fruit in the packing process.

Compounding Problem

Please furnish any information possible about compounding the following prescription to make an elegant preparation:

Colchicum tincture	*16.0 cc.*
Potassium iodide	*3.0 Gm.*
Codeine sulfate	*0.4 Gm.*
Potassium acetate	*124.0 Gm.*
Lactated pepsin q.s.	*120.0 cc.*

—G. D. N., Virginia.

In order to avoid dispensing the mixture as a suspension, which might be prepared with the aid of a suspending agent (such as tragacanth 0.75 Gm.), the following modifications might be suggested to the prescribing physician.

Increase the volume of the product in order to dissolve the potassium acetate. Replace codeine sulfate with codeine phosphate which is more soluble. If the lactated pepsin is desired for its therapeutic effect rather than as a vehicle, it should be dispensed separately to avoid salting-out the pepsin. The modified prescription could be written as follows:

Colchicum tincture	16.0 cc.
Potassium iodide	3.0 Gm.
Codeine phosphate	0.4 Gm.
Potassium acetate	124.0 Gm.
Water	100.0 cc.
Orange syrup *q.s.*	240.0 cc.

Dissolve the potassium acetate in 90 cc. of water. Dissolve the codeine phosphate in 10 cc. of water, and add to the first solution. Dissolve the potassium iodide in the mixed solutions, add sufficient orange syrup to make 224 cc., mix, and add the colchicum tincture.

Having doubled the original volume, without increasing the therapeutic agents, the prescribed dose should be doubled.

NOW IS THE TIME!

This is the season of cold drizzles, snow storms, and sleet, when the profit-wise pharmacist keeps on hand a full supply of these profitable, quick-turnover ℞ items...

now on heavy promotion to doctors everywhere

	PRODUCT NUMBER	SUGGESTED RETAIL PRICE	YOUR COST	YOUR PROFIT
TERRAMYCIN ORAL SUSPENSION** 1 oz. bottle containing 1.5 Gm. Terramycin	8671	$ 4.25	$ 2.55	$ 1.70
TERRAMYCIN TABLETS *(sugar coated)*				
250 mg., bottles of 16	8781	8.50	5.10	3.40
250 mg., bottles of 100	8791	51.00	30.60	20.40
100 mg., bottles of 25	8741	6.00	3.60	2.40
100 mg., bottles of 100	8751	22.95	13.77	9.18
50 mg., bottles of 25	8711	3.15	1.89	1.26
50 mg., bottles of 100	8721	12.10	7.26	4.84
TERRAMYCIN PEDIATRIC DROPS 10 cc. bottle containing 1.0 Gm. Terramycin	8641	2.45	1.47	.98
TERRAMYCIN NASAL *with desoxyephedrine HCl* 5 cc. dropper-bottle containing 25 mg. Terramycin and 0.25% desoxyephedrine HCl	8331	1.15	.69	.46

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THE ASSOCIATION EXTENDS A CORDIAL WELCOME TO THE FOLLOWING MEN AND WOMEN WHO WERE ACCEPTED FOR ACTIVE MEMBERSHIP DURING THE MONTH PRECEDING PREPARATION OF THIS ISSUE.

NEW LIFE MEMBERS

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Weidle, Leroy A., Jr., St. Louis, Mo.

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Evans, Bradford O., Glendale

DELAWARE

Darr, Harry I., Jr., Wilmington

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Zema, Lawrence W., Joliet

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Loeser, Albert G., Louisville
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AuBuchon, H. F., Drexel Hill
Danenberg, Jerome, Ambridge
Dehner, Eugene J., Philadelphia
Durst, Richard L., Philadelphia
Grabowski, Bernard F., Philadelphia
Greenly, Kenneth E., Fort Washington
Gutman, William, Wynnewood
Hobbs, Norman L., Rosemont
Kaskey, Robert B., Philadelphia
Leaman, John R., Gladwyne
Lucchesi, Fred J., Philadelphia
Meyers, Robert L., Philadelphia
Shaffer, Elmer K., Allentown
Stevens, Enoch P., Elkins Park
Szelak, John, York
Taylor, Nell I., Carmichaels
Timko, Andrew, Broomall
Weimann, Karl, Philadelphia
Weisman, Morris, Philadelphia
Winand, Fred E., Darby

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SOUTH DAKOTA

Johnson, Loren K., Mitchell

TENNESSEE

Bradley, Howard C., Memphis
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Schline, Louis, Richmond

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McDonald, William F., Seattle
Van Atta, Volney V., Yakima

WYOMING

Wirtz, Elroy G., Cheyenne

POSSESSIONS

Fisher, Glenn H., Anchorage, Alaska
Ramos, Luisa E., Caguas, P. R.

FOREIGN

Izgu, Enver, Ankara, Turkey

Deceased Members

Eberhardt, Ernest Godlove, Indianapolis, Ind. (Life Member)
Hanks, Lowell B., Jeannette, Pa., Oct. 10, 1953
Johnson, J. Homer, Preston, Idaho, Oct. 31, 1953
Lasher, Keith, Fort Plain, N.Y., Aug. 19, 1953
McKim, Orville E., Port Chester, N.Y., Sept. 19, 1953
McLaughlin, John J., Paterson, N.J., Oct. 1953
Minter, Maurice M., Auburn, Ala.
Mogenhan, Edward B., Rochester, N.Y.
Parentini, Caesar F., Union City, N.J., Aug. 21, 1953
Ruggiero, Juilius C. F., Belleville, N.J., Aug. 15, 1953
Scott, Jasper Paul, Indianapolis, Ind., Sept. 8, 1953
Stearn, Samuel, Chicago, Ill., June 10, 1953
Tumas, John, Washington, D.C.
Weeks, James D., Ocean Grove, N.J.
Whitney, Guy V., Winnetka, Ill.
Whyte, Hilson H., Philadelphia, Pa. (Life Member), Oct. 5, 1953
Wilson, Charles E., Corinth, Miss. (Life Member), Oct. 28, 1953
Wiseman, A. E., Verona, N.J.
Zinselmeier, Jack M., Cincinnati, Ohio

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identical with the formulas recommended by the Committee on Therapeutic Nutrition, Food and Nutrition Board, National Research Council

When tube feedings, infusions or injections are advisable, Novogran for Solution is the recommended therapy.

	NOVOGRAN FOR SOLUTION	NOVOGRAN 2X FOR SOLUTION
Thiamine hydrochloride	5 mg.	10 mg.
Riboflavin	5 mg.	10 mg.
Niacinamide	100 mg.	200 mg.
Pantothenic acid (panthenol)	20 mg.	40 mg.
Pyridoxine hydrochloride	2 mg.	4 mg.
Folic acid	1.5 mg.	3 mg.
Vitamin B_{12} (crystalline)	1 mcgm.	2 mcgm.
Ascorbic acid (as sodium ascorbate)	300 mg.	600 mg.

1 dose units, packages of 5

Novogran for Solution and Novogran 2X for Solution are supplied in 2 cc. and 5 cc. vials respectively containing lyophilized solids, and 2 cc. and 4 cc. ampuls of diluent respectively in which sodium ascorbate is dissolved to supply the ascorbic acid in the formula. The former supplies one 2 cc. dose, the latter one 4 cc. dose.

When the patient is able to take food by mouth, Novogran Capsules are the recommended therapy.

	NOVOGRAN CAPSULES
Ascorbic acid	300 mg.
Thiamine mononitrate	10 mg.
Riboflavin	10 mg.
Niacinamide	100 mg.
Pyridoxine hydrochloride	2 mg.
Calcium pantothenate	20 mg.
Vitamin B_{12} activity (as streptomyces fermentation extractives)	4 mcgm.
Folic acid	1.5 mg.
Menadione (vitamin K analog)	2 mg.

1 or more capsules daily. *Bottles of 30, 100 and 500.*

SQUIBB

"NOVOGRAN" IS A TRADEMARK

EARLY AMERICAN PHARMACIES

BY GEORGE B. GRIFFENHAGEN*

XIII. APOTHECARIES' HALL

Address: Charleston Museum, Charleston, S.C.
Hours Open: Daily—10:00 A.M. to 5:00 P.M. Sunday and Holidays—2:00 P.M. to 5:00 P.M.
Admission: Free.
Floor Space: 189 square feet (period room restoration in upstairs gallery).
Owner: The Charleston Museum, Charleston, S.C.
History: An apothecary shop was founded on the northwest corner of Broad and King Streets, Charleston, S.C., around 1781. The earliest known proprietor was Dr. Andrew Turnbull. The shop was reopened under the name of "Apothecaries' Hall" by Jacob De la Motta some time in the 1820's. Subsequent owners were William G. Trott (1845–1870); C. F. Schwettmann (1870–1894); F. W. Schwettmann (1894–1915); and F. W. Huchting (1915–1920). The fixtures were presented to the Charleston Museum by Huchting in 1920 when he moved his business several doors north on King Street. The following year F. S. Poulnot opened a new drugstore on the original site.
Description: The fixtures date from De la Motta's day. Several small apothecaries' balances, with pans made of horn, date back into the 18th Century. The large mortar and pestle sign

which hangs over the door bears the inscription, "W. G. Trott," and the legend, "Horse Powders."
References: Bennett, John, *Apothecaries' Hall*, Charleston Museum, Charleston, S.C., 1923, 21 pp. (paper bound). *Merck Report*, 40: 104 (1931). *Annals of Medical History*, 2: 259(1940). Hoch, J. H., *The History of Pharmacy in South Carolina*, City of Charleston, Charleston, S.C., 1951, 85 pp. (paper bound).

XIV. THE PORTER DRUGSTORE

Address: Greensboro Historical Museum, 220 Church Street, Greensboro, N.C.
Hours Open: Daily, except Saturday and Monday: 2:00 P.M. to 5:00 P.M.
Admission: Free.
Floor Space: 464 square feet (period room restoration).
Owner: Greensboro Historical Museum, Greensboro, N.C.
History: W. Clark Porter opened this drugstore in 1853, and from 1876 to 1881 his nephew, William Sidney Porter (better known as O. Henry), apprenticed and practiced pharmacy. In 1947, on the occasion of the 85th anniversary of O. Henry's birth, the drugstore was restored and opened for exhibition in the Greensboro Historical Museum.
Description: The restoration contains the original wall cases and medicine bottles of the original Porter Drug Store of the 1880's. The prescription counter was reproduced from sketches

which O. Henry drew while working in the store.
References: *Drug Topics*, 91: No. 21, 72(1947). *Rexall Ad-Vantages*, p. 34 (1948).

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* Associate Curator, Division of Medicine and Public Health, Smithsonian Institution, Washington, D.C., and Consultant to the A.PH.A. Museum. The 13th and 14th of a series of monographs describing apothecary shop restorations on exhibition in the United States.

NEW PRESCRIPTION PRODUCTS

All items on which information has been received in the past thirty days are reported here. Manufacturers are urged to send details of their new products as early as possible, so that pharmacists, through these pages, will have full information at the same time, or even before, products are detailed to the physician. For inclusion in this free editorial department, send descriptive literature to the JOURNAL OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, *2215 Constitution Avenue, N. W., Washington, D. C. Where possible, all descriptions should follow the style shown on these pages.*

ACHROMYCIN

Description: Achromycin (tetracycline) belongs to the same chemical family as Aureomycin (chlortetracycline). Clinical trials have shown the drug to have fewer side reactions and greater stability than the older related antibiotics. It also has an increased ability to penetrate body tissues and fluids. Achromycin is available in capsules of 50 mg., 100 mg., and 250 mg.; Spersoids dispersible powder (50 mg. per teaspoonful), 3.0 Gm.; Intravenous, 100 mg., 250 mg., and 500 mg.

Indications: For treatment of bacterial and rickettsial infections, such as pneumonia, meningitis, and osteomyelitis.

Administration: Recommended therapeutic dosage for adults is 1 Gm. per day in divided doses.

Form Supplied: Capsules—bottles of 16 and 25; Spersoids—12 doses; Intravenous—vials of 100 mg., 250 mg., and 500 mg.

Source: Lederle Laboratories Division, American Cyanamid Company, New York, N.Y.

ANTEPAR CITRATE SYRUP

Description: Syrup containing the equivalent of 100 mg. of piperazine hexahydrate per cc. (approximately 500 mg. per teaspoonful). Virtually nontoxic in therapeutic doses; very well tolerated.

Indications: For treatment of pinworm infestation (enterobiasis, oxyuriasis). Anthelmintic to *Enterobius vermicularis*.

Administration: As directed by physician.

Form Supplied: Bottles of 4 fl. oz.

Source: Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y.

FERMALOX-RORER TABLETS

Description: Each uncoated tablet contains 200 mg. of iron sulfate (principally ferrous) and 200 mg. of Maalox-Rorer (hydroxides of magnesium and aluminum).

Indications: For treatment of iron deficiency anemias.

Administration: Two tablets daily (one morning and evening). Usually this may be reduced to one tablet daily after 15 or 20 days. In minor deficiencies, one tablet daily is often sufficient.

Form Supplied: Bottles of 100 tablets.

Source: William H. Rorer, Inc., Philadelphia, Pa.

PEN-G-CAP CAPSULES

Description: Each soft gelatin capsule contains 200,000 units of procaine penicillin G suspended in oil.

Indications: For use to maintain prolonged effective blood levels.

Administration: One capsule every eight hours. The eight-hour dosage schedule does not necessitate interrupting sleep to take the medication.

Form Supplied: Bottles of 12, 100, and 500 capsules.

Source: The Upjohn Company, Kalamazoo, Mich.

PENICILLIN-PBZ TABLETS

Description: Tablets in two dosage sizes: one tablet contains 200,000 units of penicillin and 50 mg. of pyribenzamine; the other tablet, 200,000 units of penicillin and 25 mg. of pyribenzamine.

Indications: To minimize or prevent sensitivity reactions to penicillin through the use of an oral dose whenever penicillin is prescribed by the physician.

Administration: Dosage varies with the individual case, and should be used as prescribed by physician.

Form Supplied: Bottles of 36 tablets.

Source: Ciba Pharmaceutical Products, Inc., Summit, N.J.

QUELICIN CHLORIDE

Description: Each 10-cc. multiple-dose vial contains 20 mg. per cc. of Quelicin Chloride (succinylcholine chloride); each 10-cc. ampul contains 50 mg. per cc. of Quelicin Chloride (for dilution only). Although requiring refrigeration, the solution will not decrease in potency if kept at room temperature for 24 to 48 hours.

Indication: To facilitate endotracheal intubation, endoscopic examination, and orthopedic manipulation. It is a short-acting muscle relaxant useful in overcoming laryngospasm and lessening electroshock therapy muscular contractions.

(Continued on next page)

Administration: For short procedures—single intravenous doses in the range of 10 to 30 mg. usually suffice, depending on the patient; the effect of the drug usually disappears within five minutes. For long procedures—intravenous drip technique is preferable and employs either a 0.1 per cent or a 0.2 per cent solution of Quelicin Chloride in isotonic saline solution or in dextrose 5 per cent in water. Average dose for adults is 2 or 3 mg. per minute. It is contraindicated in patients with severe liver disease, severe anemia, severe malnutrition, and insecticide poisoning.

Form Supplied: 10-cc. multiple-dose vials and 10-cc. ampuls.

Source: Abbott Laboratories, North Chicago, Ill.

SALIMEPH-C TABLETS

Description: Each tablet contains: salicylamide 250 mg.; mephenesin, 250 mg.; and ascorbic acid, 15 mg.

Indications: For treatment of the pain/spasm cycle of arthritis and other musculoskeletal disorders.

Administration: As prescribed by physician.

Form Supplied: Bottles of 100 and 500 tablets.

Source: Kremers-Urban Co., Milwaukee, Wis.

THIOSULFIL—SUSPENSION AND TABLETS

Description: Each 5 cc. (teaspoonful) and each tablet contain 0.25 Gm. of sulfamethylthiadiazole.

Indications: For the treatment of urinary tract infections. Alkalinization is not required and fluids are restricted rather than forced.

Administration: As directed by physician.

Form Supplied: Suspension—bottles of 4 and 16 fl. oz.; tablets—bottles of 100 and 1,000.

Source: Ayerst, McKenna & Harrison Ltd. New York, N.Y.

Other New Products

(Chemicals, clinical trial drugs, diagnostic aids, and equipment for the retail and hospital pharmacy)

AEROPLAST DRESSING

Aeroplast is a new, liquid, "spray-on" dressing which replaces gauze dressings in all their varied applications—surgical and traumatic wounds, burns, abrasions, excoriation, etc. Sprayed directly onto the lesion from a self-contained aerosol "bomb," it forms a transparent, flexible, occlusive plastic film. It is nontoxic, nonsensitizing, and mildly bacteriostatic. Dressings may be peeled off easily and without discomfort at any time. Aeroplast is supplied in 6-oz. aerosol dispensers by the *Aeroplast Corporation.*

ASPIRIN FOR CHILDREN

A lemon-flavored, $1^1/_4$ gr. aspirin tablet for children that more completely masks the aspirin taste is being marketed by *E. R. Squibb & Sons, Division of Mathieson Chemical Company.* The tablets are supplied in bottles of 50.

BICILLIN—CHILDREN'S DOSAGE FORM

Wyeth, Inc. is now distributing its oral suspension of Bicillin in a reduced concentration for children. Each teaspoonful (5 cc.) of the new suspension contains 150,000 units of Bicillin, as opposed to 300,000 units per teaspoonful in the standard dose form. A vanilla-custard flavor has been employed to differentiate from the standard suspension, which has a cherry flavor. It is indicated for the treatment of penicillin-susceptible infections in children or as prophylaxis against rheumatic fever and secondary infection following tonsillectomy, tooth extraction, or other surgery. It is supplied in bottles of 2 fl. oz.

BRISTAMIN APC TABLETS

Bristol Laboratories Inc. has recently added a new tablet to its line of Bristamin products. Each Bristamin APC Tablet contains: Bristamin dihydrogen citrate (phenyltoloxamine dihydrogen citrate), equivalent to 25 mg. of Bristamin base; acetylsalicylic acid, 0.21 Gm.; phenacetin, 0.15 Gm.; caffeine, 0.03 Gm. The tablets are indicated for the treatment and suppression of rhinorrhea and allergic-like symptoms, as well as for the relief of the headache and muscular aches and pains accompanying the common cold. For best results the tablets must be given at the onset of symptoms. Two tablets should be taken as soon as the first signs of a cold appear. Subsequently, a dosage of one tablet every four hours is employed for the first day. On the second and third days, one tablet every four hours is the dosage employed for four doses. *Therapy should be limited to three days.* Children between the ages of 6 and 12 years should receive $^1/_2$ the adult dosage. The tablets are supplied in bottles of 100 and 1,000.

CILLORAL SUSPENSION

Bristol Laboratories Inc. has recently announced the availability of penicillin G potassium in a liquid form. The new product, Cilloral Suspension, requires no compounding prior to dispensing and may be stored at normal room temperatures for two years. While tablets of these penicillin salts are widely employed in the treatment of many infections caused by penicillin-sensitive organisms, the advent of Cilloral Suspension in a one-teaspoonful dose containing 300,000 units of penicillin G potassium provides a highly suitable dosage for children and those adults who prefer liquid medication to the tablet dosage form.

DELTAMIDE WITH PENICILLIN—TABLETS AND SUSPENSION

The availability of Deltamide with Penicillin, Tablets and Suspension, has been recently an-

nounced by *The Armour Laboratories*. Each tablet or 5 cc. contains 250,000 units of penicillin G potassium, in addition to the sulfonamides previously available in Deltamide Tablets.

DESITIN LOTION

Previously supplied in 6-oz. bottles, Desitin Lotion is now available in wide-mouth 4-oz. bottles, according to a recent release from *Desitin Chemical Company*.

DRILOZETS LOZENGES, WITHDRAWAL OF

Smith, Kline & French Laboratories recently announced the withdrawal of its product Drilozets Lozenges, because of difficulty in maintaining the potency of one of its ingredients.

ERYTHROCIN TABLETS—NEW DOSAGE SIZE

Erythrocin Tablets, formerly supplied by *Abbott Laboratories* only in 100-mg. tablets, are now being marketed in a new dosage size, 200 mg. of erythromycin per tablet.

FERROLIP DROPS

Ferrolip Drops, a new dosage form introduced by *Flint, Eaton & Company*, is a flavored preparation for the prevention and treatment of iron deficiency anemias in children and adults. Each 1 cc. contains iron choline citrate equivalent to 16 mg. of iron. The average dose for children up to six years of age is 0.5 cc. daily. For older children and adults the dose is 1.0 cc. daily. Ferrolip Drops are supplied in 30-cc. bottles with graduated droppers.

FURACIN URETHRAL SUPPOSITORIES

A new addition to its line of Furacin products, Furacin Urethral Suppositories, has been recently introduced by *Eaton Laboratories, Inc.* The suppositories contain Furacin (nitrofurazone), 0.2 per cent, and 2 per cent diperodon hydrochloride, a local anesthetic, dissolved in a water-dispersible base composed of glyceryl monolaurate and sorethytan monostearate. They are indicated for treatment of nongonorrheal, bacterial (granular) urethritis in women. After voiding, the patient inserts one suppository completely into the urethra and lies supine for 10 minutes to permit melting and spreading. They are supplied in bottles of 12 suppositories, 1.3 Gm. each, wrapped in foil.

FURADANTIN TABLETS—NEW DOSAGE SIZE

Formerly supplied in tablets containing 50 mg. or 100 mg. of N-(5-nitro-2-furfurylidene)-1-aminohydantoin, Furadantin is now being supplied by *Eaton Laboratories, Inc.* in tablets containing 10 mg. These new tablets are called Furadantin Diagnostic Tablets, and are supplied in vials of 25 tablets, 3 vials per box.

GYNETONE REPETABS

Formerly supplied as an injection and as tablets, Gynetone is now being marketed in Repetabs. One dosage size contains 0.02 mg. ethinyl estradiol plus 5 mg. methyltestosterone; the other, 0.04 mg. ethinyl estradiol plus 10 mg. methyltestosterone. Gynetone Repetabs are indicated for the treatment of the menopause and osteoporosis, as well as for the management of geriatric patients where hormonal supplementation is desirable. Recommended dosage for menopause is one or two 0.04-mg. or two to four 0.02-mg. Repetabs daily; maintenance dosage, one 0.02-mg. Repetabs daily. For treatment of osteoporosis and in geriatrics, one or two 0.02-mg. Repetabs daily is recommended. Repetabs 0.02 mg. and 0.04 mg. are supplied in bottles of 30 and 100 each by *Schering Corporation*.

HYDROCORTONE TABLETS—NEW DOSAGE SIZE

Merck & Co., Inc., have announced the availability of 10-mg. tablets of Hydrocortone (hydrocortisone), in addition to the 5-mg. and 20-mg. tablets previously introduced.

SOLANITAL B-C CAPSULES

The availability of Solanital B-C, a balanced mixture of natural anticholinergic alkaloids plus B complex vitamins and vitamin C, in tablet form has been announced by *Smith-Dorsey, Division of The Wander Company*. The capsules are supplied in bottles of 100, 500, and 1,000.

SPASTICOL S. A. TABLETS

Spasticol S. A. Tablets have been recently introduced by the *Key Corporation*. Each tablet contains 5 mg. of homatropine methylbromide and $^3/_4$ gr. of phenobarbital. The tablets are available in bottles of 50 and 500.

SWEETA

Sweeta, a new concentrated liquid sweetner product in a convenient squeeze-a-drop, 24-cc. bottle, has been introduced by *E. R. Squibb, Divison of the Mathieson Chemical Company*. Each two drops are the equivalent of a teaspoonful of sugar.

TUBEX

A new method of administering injectable drugs, eliminating the need for sterilized equipment and at the same time avoiding any possibility of contaminating the injection needle, was recently introduced by *Wyeth, Inc.* The new dose unit is an improved Wyeth "Tubex," to which an injection needle is affixed, ready for use. A sterile rubber sleeve protecting the needle need not be removed until the moment of injection.

potency considered,

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'Multicebrin' is *your* "best buy," too, in the new case of fifty 100's at only $146 per case. Your gross profit per case is $97, or 39.9 percent on the selling price. Order a case today from your favorite Lilly wholesaler!

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GELSEALS

MULTICEBRIN

(Pan-Vitamins, Lilly)